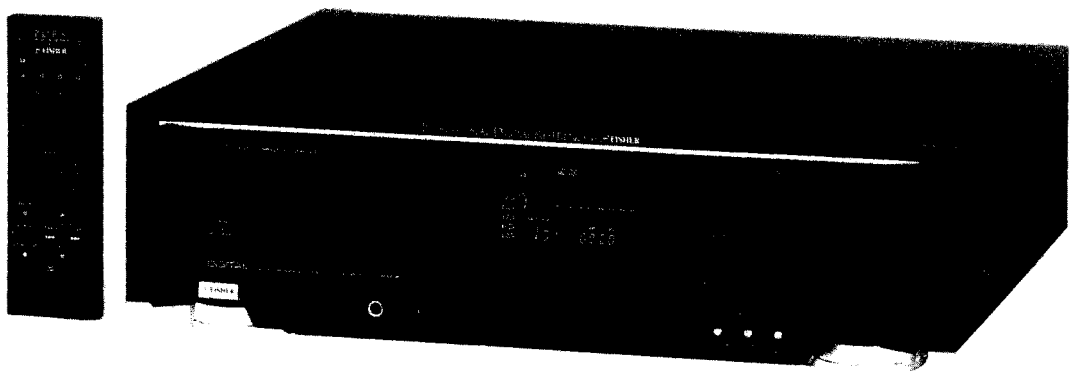
SERVICE MANUAL

FISHER

AUTOMATIC DIGITAL COMPACT DISC CHANGER WITH REMOTE CONTROL RDAC-Z1

DAC-Z1

(EUROPE)



137 347 40 (EUROPE)
137 347 41 (SWISS)

SPECIFICATIONS

System ..... Compact disc digital audio system
Remote Control (RDAC-Z1) ..... 31-function, wireless remote control

AUDIO CHARACTERISTICS

Frequency Response ..... 2 Hz – 20 kHz ±0.5dB
Harmonic Distortion ..... Less than 0.0025% (1 kHz)
S/N Ratio (IHF, A-Network) ..... More than 110 dB
Dynamic Range ..... More than 98 dB
Wow and Flutter ..... Below measurable limits
Channel Separation ..... More than 100 dB (1 kHz)
Output Voltage max. ..... 2 Vrms
Output Level and Impedance
Headphones ..... 0 ~ 500 mV/8 Ω
Digital Output System ..... Digital audio interface format
Optical Output ..... –15 dBm ~ –21 dBm
Coaxial Output ..... 500 mVp-p/75 Ω ±20%
Program Functions ..... 32 selections
Disc Title Functions ..... 170 selections
Intro Scan ..... 10 sec., or 1 ~ 99 sec. programmable
Scanning ..... 2 speed fast-forward/back with sound
Repeat ..... One track, all tracks, all programmed selections

DIGITAL SIGNAL PROCESSING

Optical Pickup ..... 3-beam laser
Error Correction ..... CIRC
Sampling Frequency ..... 44.1 kHz
D/A Conversion ..... 2 D/A Converters 18-bit linear
Filters ..... 8-times oversampling digital filter, linear phase analog filter

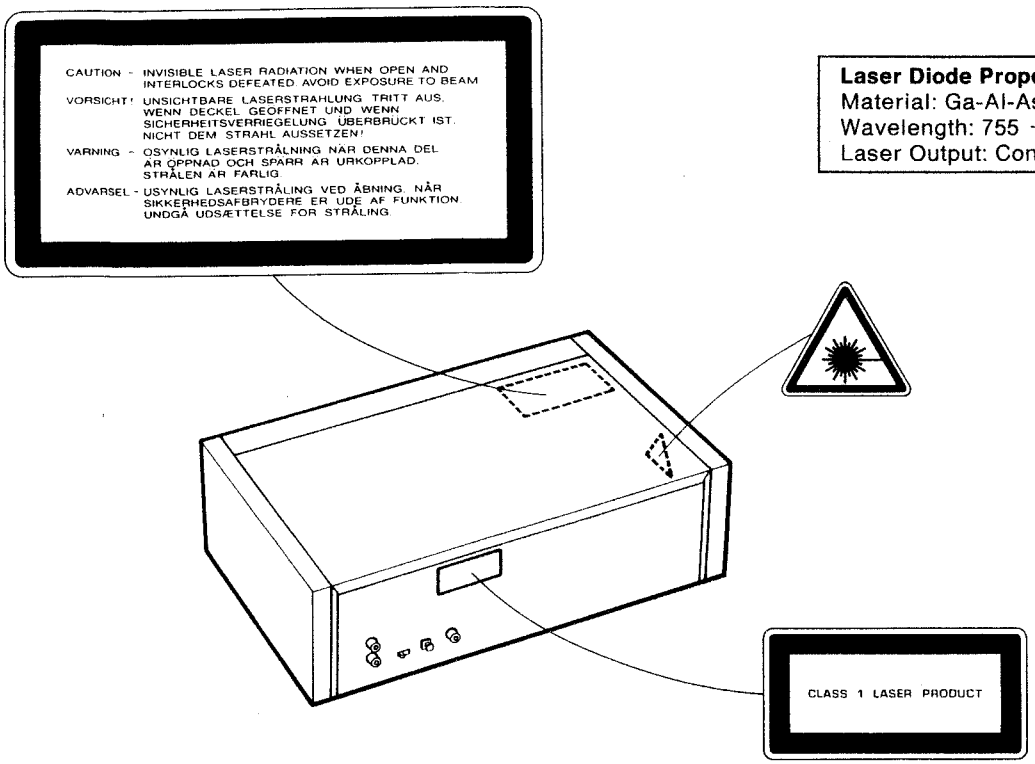
GENERAL

Power Requirements ..... AC 220V
(50Hz) 30 Watts
Dimensions (WxHxD) 480X130X381
Weight (approx.) 9.4kg

– Specifications and design are subject to change without notice. –

REFERENCE No. WM-570349

SAFETY CERTIFICATION

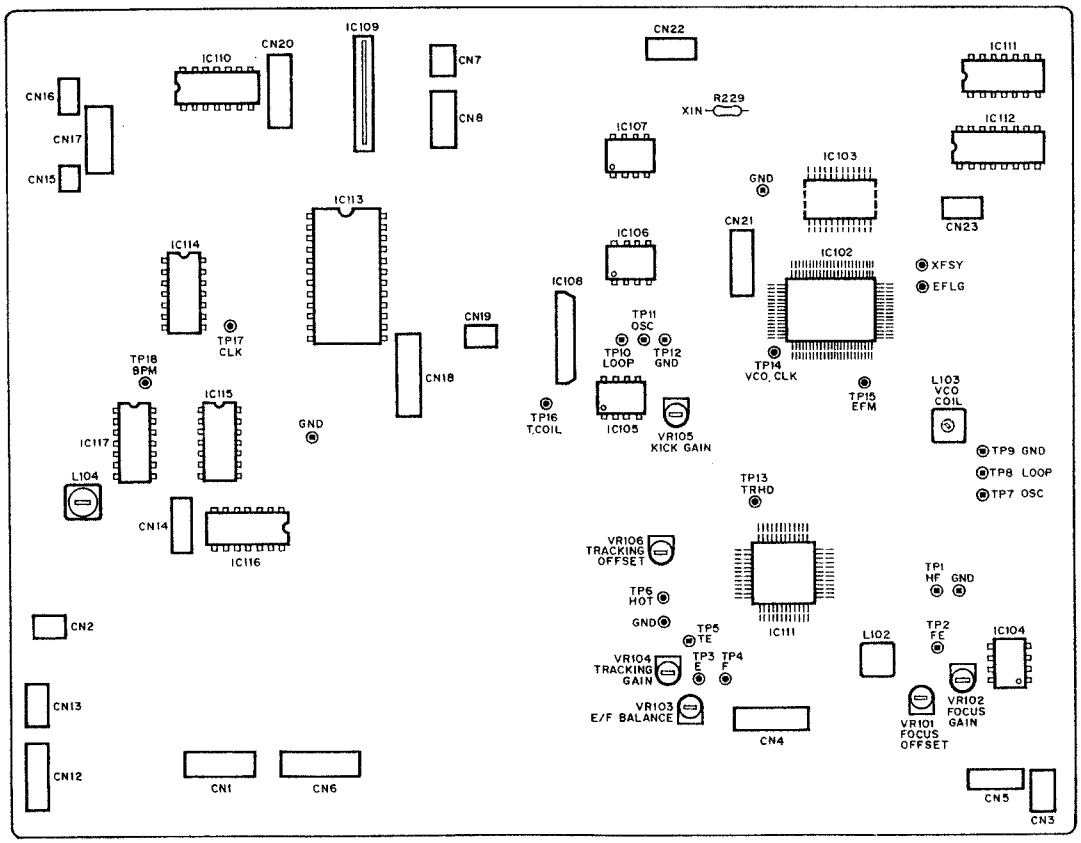

CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
VORSICHT! UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEOFFNET UND WENN SICHERHEITSVERRIEGELUNG UBERBRUCKT IST. NICHT DEM STRAHL AUSSETZEN!
VARNING - OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
ADVARSEL - USYNLIG LASERSTRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
CLASS 1 LASER PRODUCT

Laser Diode Properties
Material: Ga-Al-As
Wavelength: 755 – 815 nm (25°C)
Laser Output: Continuous Wave max.0.5 mW

CAUTION – USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

THE COMPACT DISC PLAYER SHOULD NOT BE ADJUSTED OR REPAIRED BY ANYONE EXCEPT QUALIFIED SERVICE PERSONNEL.

CD MAIN P.C.BOARD ALIGNMENT POINTS
(TOP VIEW)



CD PLAYER ADJUSTMENT PROCEDURES

BEFORE CHECKING OR ADJUSTING CD PLAYER

1. Procedures for all adjustments for the CD player from start to finish are described below.
2. If no problems are found after each item is checked when the pick-up is replaced, there is no need to adjust all items again.

SETTING OF INITIAL POSITION OF VOLUME

1. Set the variable resistors to the initial positions listed below:

VR101 (FOCUS OFFSET)	Mechanical Center
VR102 (FOCUS GAIN)	Mechanical Center
VR103 (E/F BALANCE)	Mechanical Center
VR104 (TRACKING GAIN)	Mechanical Center
VR105 (KICK GAIN)	Mechanical Center
VR106 (TRACKING OFFSET)	Mechanical Center

MASTER CLOCK CHECKING

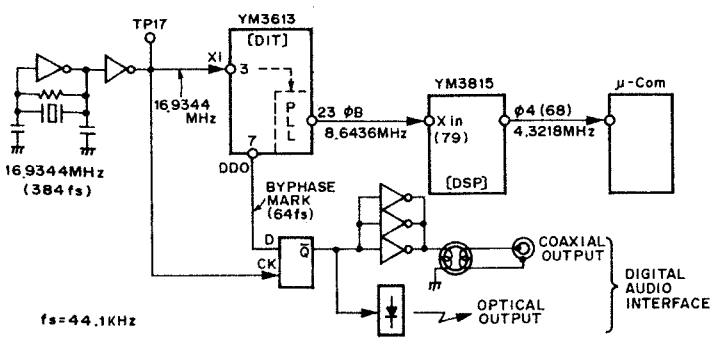
1. Since this adjustment Sets standard time for the total system, be sure to adjust before operation.
2. Connect the frequency counter between the **TP7 CLK** and to **GND.**
3. Check the frequency counter reads 16.9344MHz ±300p.p.m.

PLL (VCO) FREE RUN FREQUENCY ADJUSTMENT

1. Connect the frequency counter between the **TP14 VCO** and to **GND.** (Use a 10:1 probe)
2. Short the **TP1 HF OUT** pin to **GND.**
3. Push the POWER button to switch the power on and push the STOP button.
4. Adjust the OSC coil L103 using a plastic screwdriver until the frequency counter indicator reads 4.3218MHz ±10kHz.

DSP SYSTEM CLOCK CHECKING

1. Connect the frequency counter between the test point **X IN** (IC YM3815) of **R229** lead and to **GND.**
2. Check the frequency counter reads 8.6436MHz.



FOCUS OFFSET ADJUSTMENT

1. Push the POWER button to switch the power on and push the DISC EJECT button to open the Disc Tray and remove the disc.
2. Push the DISC EJECT button to close the Disc Tray and push the STOP button.
3. Connect a DC Voltmeter to the **TP2 FE** and to **GND.**
4. In this condition check that the DC Voltmeter indicator is in the range 0V±20mV, and adjust VR101 if it is not.

TRACKING OFFSET ADJUSTMENT

1. Push the POWER button to switch the power on and push the STOP button.
2. Connect a DC Voltmeter to the **TP16 T.COIL** and to **GND.**
3. In this condition check that the DC Voltmeter indicator is in the range 0V±50mV, and adjust VR106 if it is not.

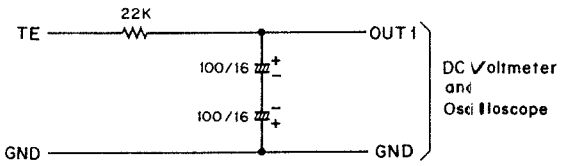
NOTE:
Perform this adjustment once again after adjusting the E/F BALANCE and TRACKING GAIN signals.

CONFIRMING HF LEVEL

1. PLAY the fourth item on the test disc (Modern Wave Ⅱ).
2. Connect an oscilloscope to the **TP1 HF** pin, and check that its HF level is in the range 2.6±0.5V(p-p).
3. If the results of the above procedure are not satisfactory, the Pick-up is damaged.

E/F BALANCE ADJUSTMENT

1. Place the test disc (Modern Wave Ⅱ) on the Disc Tray, and play the fourth item on the disc. Short the test point **TP TEST** pins on the μ-con Control P.C.Board to the TEST mode.
2. Short the **TP6 HOT** pin to **GND** to turn tracking servo OFF.
3. Connect a DC Voltmeter and an oscilloscope via the low-pass filter like that shown in the illustration below to the test terminal **TP5 TE** (tracking error) pin.



Measurement circuit

4. Adjust VR103 so that the DC Voltmeter reading is 0V±45mV (oscilloscope waveform is symmetric to + and − about the zero level).

CD PLAYER ADJUSTMENT PROCEDURES (Continued)

FOCUS GAIN ADJUSTMENT

1. Apply VR102 to the position of Mechanical center position, and place the test disc (Modern Wave Ⅱ) on the Disc Tray.
2. Push the POWER button to switch the power on and PLAY the first item on the test disc. Now apply a signal of 1kHz and 0.3Vp-p from the signal generator to the **TP7 OSC.**
3. Connect an oscilloscope to the **TP8 LOOP** pin and to **GND.**
4. Set the oscilloscope to X-Y operation, and while observing the lissajous waveform adjust VR102 to the point where the phase difference is 90° as shown in Fig. 1 below.

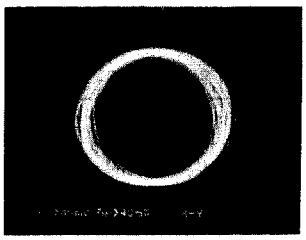
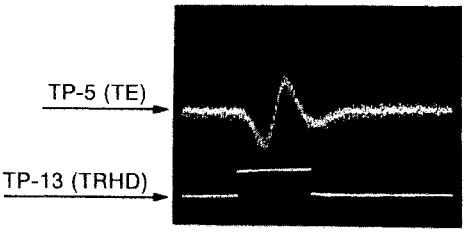


Fig.1

KICK GAIN ADJUSTMENT

1. Place the test disc (Modern Wave Ⅱ) on the Disc Tray.
2. Set the oscilloscope to NORMAL TRIG., set the EXT. TRIG. pin to external trigger, and input the trigger from test point **TP13 TRHD** pin to the oscilloscope.
3. Next connect test point **TP5 TE** pin to Channel 1 of the oscilloscope.
4. Push the POWER button to switch the power on and PLAY the first item on the test disc, and the push the PAUSE button. Now observe the waveform for TE with trigger applied from test point **TP13 TRHD** pin. At this point, adjust VR105 so that a kick pulse waveform of about 1 to 1.3 tracks as shown in Fig. 2 below is obtained.



TRACKING GAIN ADJUSTMENT

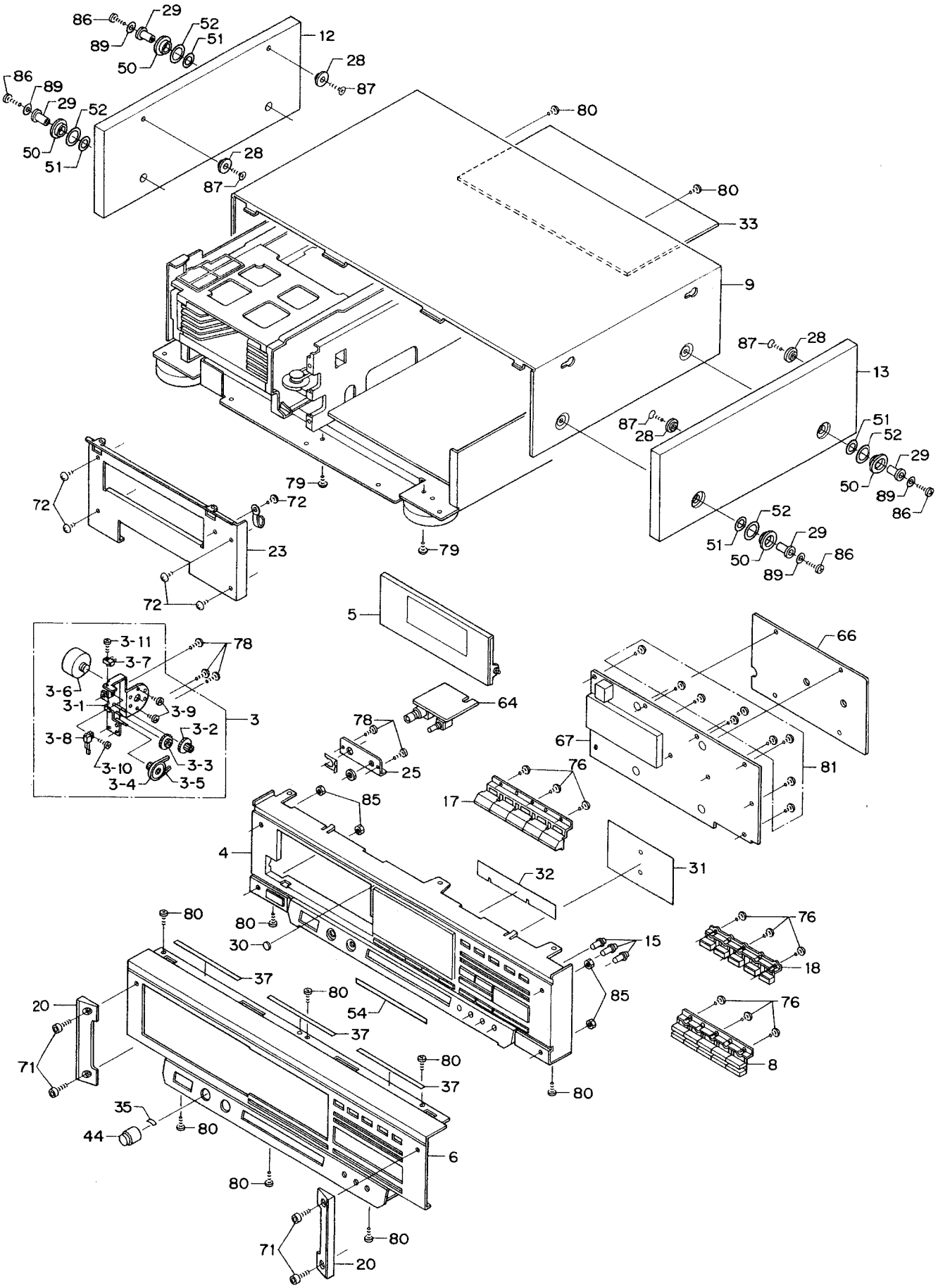
1. Apply VR104 to the position of Mechanical center position, and place the test disc (Modern Wave Ⅱ) on the Disc Tray.
2. Push the POWER button to switch the power on and PLAY the first item on the test disc. Now apply a signal of 1250Hz and 0.3Vp-p from the signal generator to the **TP11 OSC.**
3. Connect an oscilloscope to the **TP10 LOOP** pin and to **GND.**
4. Set the oscilloscope to X-Y operation, and while observing the lissajous waveform adjust VR104 to the point where the phase difference is 90° as shown in Fig. 1 above.

NOTE:
If these two adjustments are performed, the TRACKING OFFSET must also be adjusted.

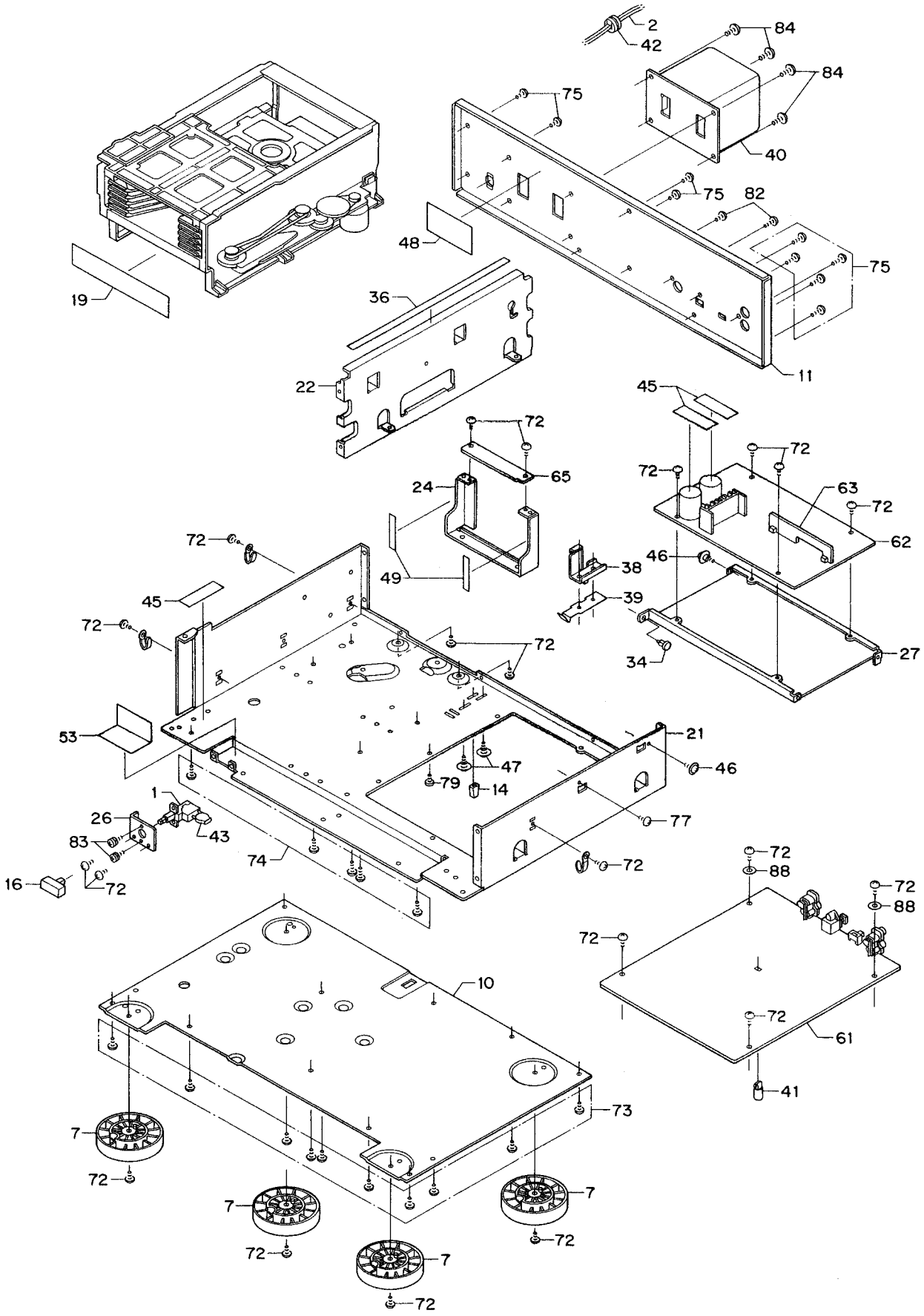
D/A CONVERTER DISTORTION ADJUSTMENT

1. Change the Output Selector Switch to ANALOG position.
2. Connect the Harmonic Distortion Meter to the LINE OUT jack through the Amplifier (60dB) and Low Pass Filter (20kHz).
3. Place the test disc YEDS7/YEDS18 (SONY) on the Disc Tray, and play the 1kHz (−60dB).
4. Adjust the Audio P.C.Board VR301 (Left channel) and VR302 (Right channel) so that distortion is at a minimum level (less than 1.6%).
5. Disconnect the Amplifier (60dB) and play the 1kHz (0dB).
6. In this condition check that the Distortion meter indicator is less than 0.003%.

CABINET EXPLODED VIEW (1)



CABINET EXPLODED VIEW (2)



CABINET PARTS LIST

Ref. No.	Part No.	Description	Q'ty
PACKAGE			
	620 000 0024	Bag Polyethylene	1
	620 201 8904	Outer Carton	1
	620 196 4844	Sheet,Poly	1
	620 195 3787	Pad,Bottom	1
	620 195 3794	Pad,Top	1
	620 152 7452	Serial No. Sheet	2
ACCESSORIES			
	620 202 7852	Assy,Poly Cover	1
	620 202 7869	Instruction Manual	1
	620 196 9757	Cord	1
	620 196 2826	Opto Connector,Digital I/O	1
	620 152 2624	Certificate Card	1
	620 152 7452	Serial No. Sheet	1
	620 057 8783	Bag Fan	1
	620 197 0555	Remocon,RDAC-Z1 (Remote Control)	1
	620 198 9786	Label	1
CABINET			
	⚠ 620 006 6679	Capacitor 0.01MF400V [C1]	1
	620 017 4961	Connector 2P Assy [CN7W]	1
	620 017 4442	Connector 4P Assy [CN8W]	1
	620 017 3773	Connector 6P Assy [CN10W]	1
	620 197 3679	Assy,Connector-S,6P [CN6]	1
	620 197 3709	Assy,Connector-S,4P [CN11]	1
	620 197 3846	Assy,Connector-S,6P [CN24]	1
	620 197 3853	Assy,Connector-S,2P [CN25]	1
	620 197 3693	Assy,Connector-S,7P	1
	620 200 4136	Assy,Receptacle,1P	1
	620 203 8346	Assy,Terminal,1P	1
	620 061 2340	Notes (Laser)	1
	620 061 2401	Notes (Laser)	1
	620 061 2418	Notes (Laser)	1
	620 125 8110	Lug	4
	620 123 7658	Sheet	2
	620 125 8424	Wire Band	12
	620 152 7452	Serial No. Sheet	1
1	⚠ 620 016 7598	Power Switch [SW1]	1
2	⚠ 620 023 7550	Power Cord	1
3	620 196 4790	Unit,Lid Mecha	1
3-1	620 196 4875	Assy,Chassis,Lid	1
3-2	620 196 3380	Gear,Eject	1
3-3	620 196 3397	Gear,Load	1
3-4	620 196 3403	Pulley,Gear	1
3-5	620 196 3373	Belt,Square	1
3-6	620 196 4929	Motor	1
3-7	620 196 4868	Switch,Push,NO,1P-1T	1
3-8	620 196 4073	Switch,Leaf	1
3-9	411 031 0103	SCR BIN 2.6X3	2
3-10	411 002 4901	SCR PAN 2X4	1
3-11	411 002 5007	SCR PAN 2X6	1
4	620 196 4493	Assy,Cabinet,Front	1
5	620 196 4486	Assy,Lid,Disk	1
6	620 196 4547	Assy,Panel,Front	1
7	620 201 8508	Assy,Foot (Europe)	4
7	620 195 9413	Assy,Foot (Swiss)	4
8	620 196 4523	Assy,Hinge,10 Key	1
9	620 195 3886	Cover,Top	1
10	620 196 1263	Plate,Bottom	1
11	620 201 8898	Panel,Rear	1
12	620 201 7754	Panel,Side,Wood,Left (Europe)	1
12	620 195 3732	Panel,Side,Wood,Left (Swiss)	1
13	620 201 7761	Panel,Side,Wood,Right (Europe)	1
13	620 195 3749	Panel,Side,Wood,Right (Swiss)	1
14	620 197 4317	Knob,Lock Lever	1
15	620 195 5590	Button,Small	3
16	620 195 5514	Button,Power	1
17	620 195 5552	Button,Function	1
18	620 195 5569	Button,Operate	1
19	620 197 1224	Veil	1
20	620 195 1943	Handle	2
21	620 196 1225	Chassis,Main	1
22	620 196 1232	Chassis,Center	1
23	620 196 1218	Chassis,Front	1
24	620 195 8256	Bracket-E,Trans	1
25	620 196 1195	Bracket-E,Volume	1
26	620 196 1201	Bracket-E,Power Switch	1
27	620 196 1270	Bracket-E,PCB Shield	1

Ref. No.	Part No.	Description	Q'ty
28	620 195 3800	Spacer	4
29	620 201 7105	Spacer,Wood	4
30	620 198 6921	Cushion,Front	1
31	620 199 5039	Cushion,Button (L)	1
32	620 199 5060	Cushion,Button (S)	1
33	620 197 5192	Pad,Damper	1
34	620 196 4226	Fixer,Rivet	1
35	620 198 6570	Sheet,Volume	1
36	620 197 5758	Felt,Cushion-1	1
37	620 197 5765	Felt,Cushion-2	3
38	620 196 1256	Lever,Lock	1
39	620 196 1249	Spring,Plate,Lock	1
40	⚠ 620 201 8553	Power Trans,SEV,30VA	1
41	620 050 4409	Mount P.C.B	1
42	620 053 2136	Bushing (Power Cord)	1
or	620 053 2129	Bushing (Power Cord)	1
43	620 053 7025	Cover Safety	1
44	620 189 1195	Knob Volume (Phones Level Control)	1
45	620 114 9104	Sheet	3
46	620 122 6423	Screw, PAN +M2.6X5.0	2
47	620 123 0130	SCR PAN W/WAS +M2.6X5.0	2
48	620 202 9634	Insulator,Sheet	1
49	620 124 5509	Cushion	2
50	620 201 7099	Cap,Wood	4
51	620 201 9949	Spacer	4
52	620 203 7073	Cushion	4
53	620 201 9611	Sheet,Switch,Power	1
54	620 116 1137	Adhesive Film	1
61	620 202 1355	Assy,PCB,Main	1
62	620 197 2276	Assy,PCB,Audio	1
63	620 197 2313	Assy,PCB,Audio Sub	1
64	620 197 2344	Assy,PCB,Headphone	1
65	620 197 2368	Assy,PCB,Power	1
66	620 197 3617	Assy,PCB,Control	1
67	620 197 3624	Assy,PCB,Display	1
71	412 033 7404	SPECIAL SCREW	4
72	411 020 7700	SCR S-TPG BRZ 3X6	26
73	411 099 9704	SCR S-TPG BRZ 3X6	10
74	411 021 6405	SCR S-TPG BIN 3X8	5
75	411 099 9803	SCR S-TPG BRZ 3X8	9
76	411 021 0809	SCR S-TPG BIN 2X6	9
77	411 021 2704	SCR S-TPG BIN 2.6X6	1
78	411 021 3107	SCR S-TPG BIN 2.6X8	5
79	411 021 5903	SCR S-TPG BIN 3X6	3
80	411 021 6603	SCR S-TPG BIN 3X8	10
81	411 107 6404	SCR S-TPG PAN 2.6X6	9
82	412 034 8509	SPECIAL SCREW	2
83	411 003 8908	SCR PAN+SW 3X6	2
84	411 111 3000	SCR TRS 5X8	4
85	411 004 5906	NUT HEX 5	4
86	412 033 7602	SPECIAL SCREW	4
87	411 082 9605	SCR WOOD FLT 3.1X16	4
88	411 085 2504	WASHER Out TW 3	2
89	412 033 7909	SPECIAL WASHER	4

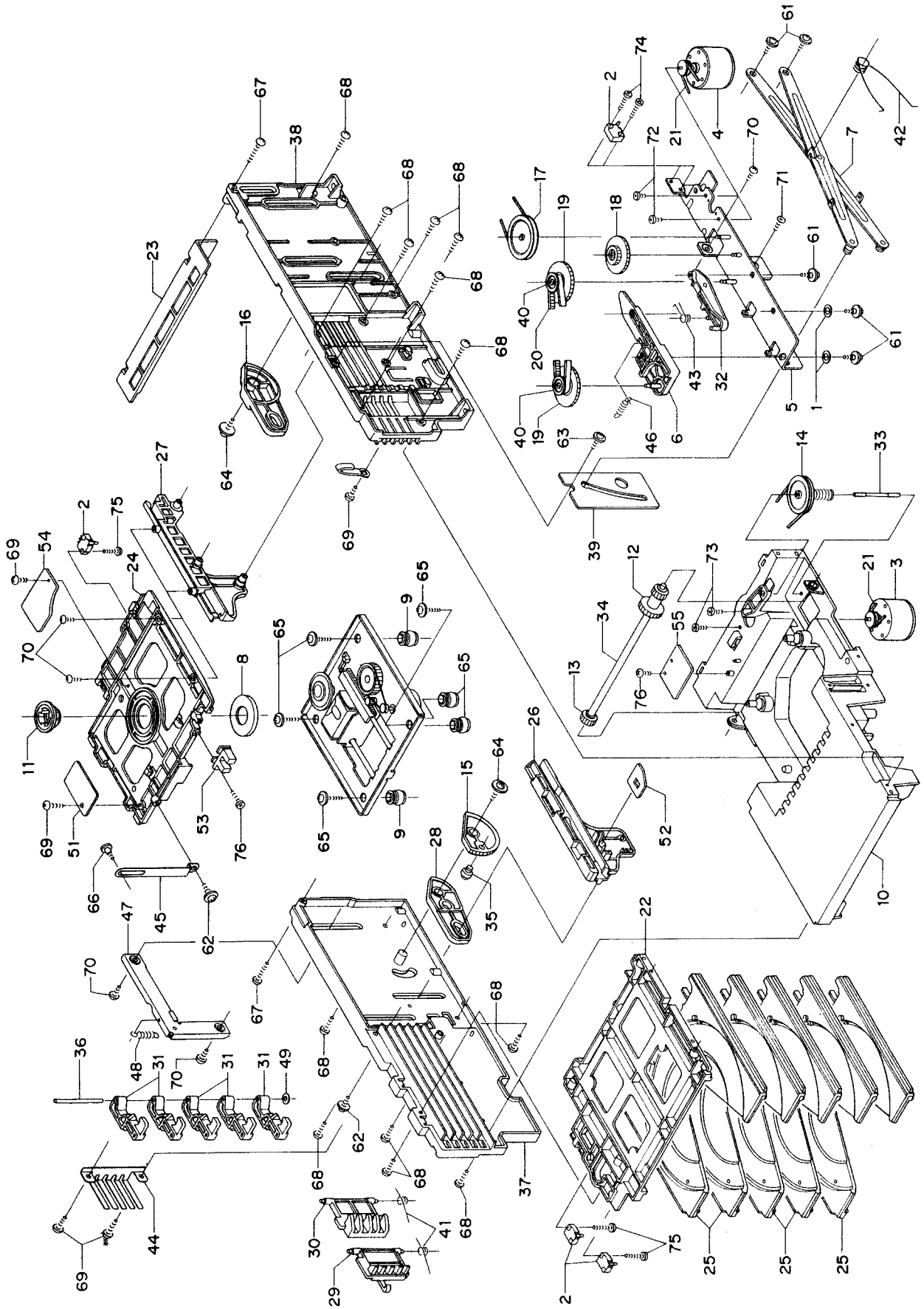
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CD INDEX MECHANISM EXPLODED VIEW



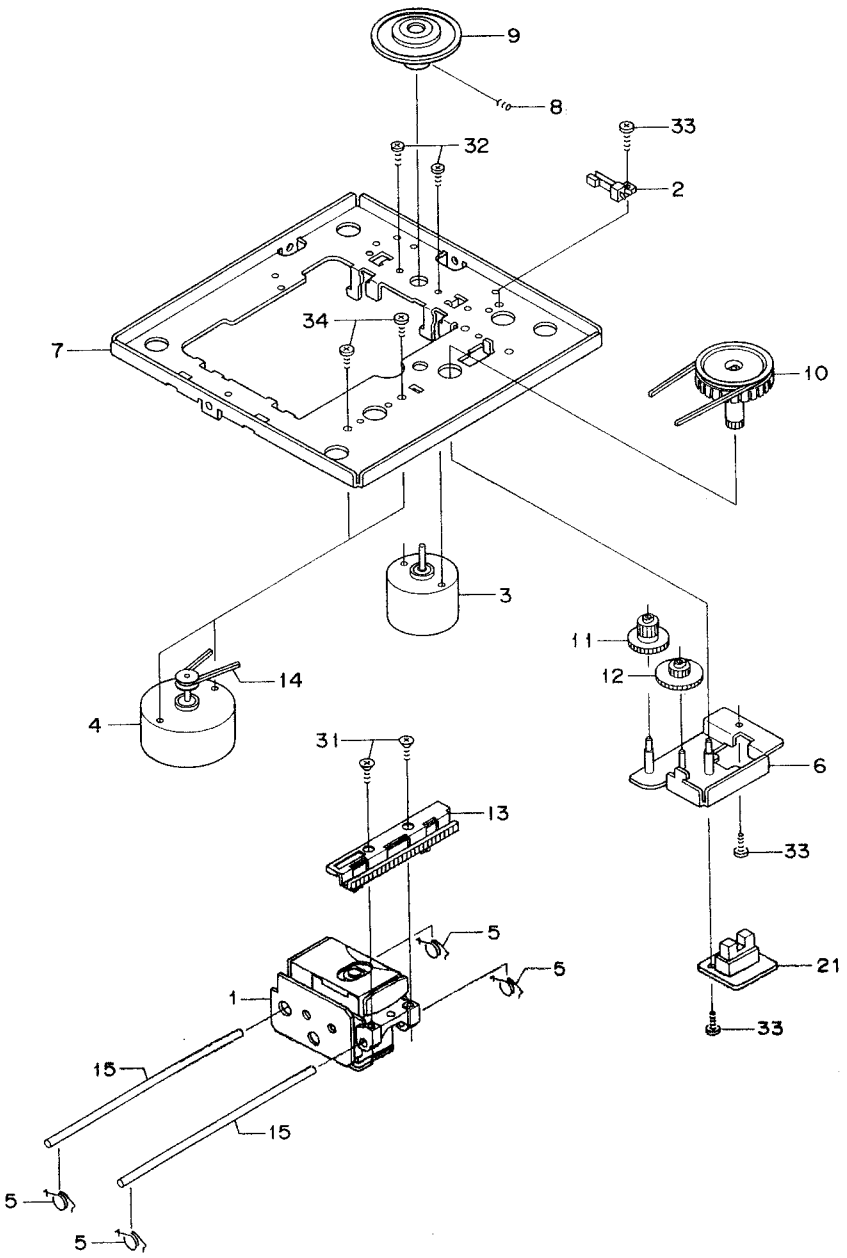
CD INDEX MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
CD INDEX MECHANISM			
	620 114 9104	Sheet	1
	620 125 8110	Lug	1
	620 125 8424	Wire Band	6
1	620 125 6673	Washer 4.7X9X0.13	2
2	620 016 9363	Lever Switch 1P2T	4
3	620 030 4108	Motor (Index)	1
4	620 030 4115	Motor (Load)	1
5	620 084 2501	Slide Plate Assy	1
6	620 085 0896	Lever Index Assy	1
7	620 085 3385	Arm Index Assy	1
8	620 085 6553	Magnet Assy	1
9	620 187 2767	Cushion Rubber	4
10	620 187 3658	Chassis (Load)	1
11	620 119 1530	Holder Disc	1
12	620 127 8514	Gear Wormwheel	1
13	620 127 8521	Gear Index	1
14	620 127 8538	Gear Worm	1
15	620 127 8545	Gear Cam Left	1
16	620 127 8552	Gear Cam Right	1
17	620 127 8569	Gear Pulley	1
18	620 127 8576	Gear Load	1
19	620 127 8583	Gear Pinion	2
20	620 128 3600	Belt (Timing)	1
21	620 128 6540	Belt	2
22	620 129 5948	Support Front	1
23	620 129 5955	Support Rear	1
24	620 129 5962	Flap Disc Cramp	1
25	620 193 6438	Tray	5
26	620 130 6736	Slide Left	1
27	620 130 6743	Slide Right	1
28	620 131 9262	Lever Cam Left	1
29	620 131 9279	Lever Eject	1
30	620 131 9286	Lever Stop	1
31	620 131 9293	Lever Rock	5
32	620 131 9309	Lever Adjust	1
33	620 133 3572	Shaft Gear Worm	1
34	620 133 3589	Shaft Index	1
35	620 133 3596	Pin Adjust	1
36	620 133 3602	Shaft Lever Rock	1
37	620 136 0684	Guide Left	1
38	620 136 0691	Guide Right	1
39	620 136 0707	Guide Plate	1
40	620 136 5887	Cap Gear Pinion	2
41	620 137 9105	Spring Lever Stop	2
42	620 137 9112	Spring Arm Index	1
43	620 137 9129	Spring Lever Adjust	1
44	620 138 6394	Spring Lever Rock	1
45	620 138 6400	Spring Plate	1
46	620 139 1091	Spring Lever Index	1
47	620 130 7122	Slide Plate Left	1
48	620 139 1367	Spring Slide PL Left	1
49	620 125 3801	Washer 3.1X5.4X0.5	1
51	620 079 3001	LED P.C.B. Assy	1
52	620 079 3018	Photo Transistor P.C.B. Assy	1
53	620 079 3025	Photo Sensor P.C.B. Assy	1
54	620 197 2399	LED 8cm P.C.B Assy	1
55	620 197 2412	Sensor 8cm P.C.B. Assy	1
61	620 122 6249	Screw Pan Hd.Tap-2,W/Washer+ M2.6X5.0	5
62	620 122 6324	Screw Washer	2
63	620 051 4279	Screw 3X8	1
64	620 051 4316	Screw 3X10	2
65	620 123 1021	Screw Braz. HD. + M2.6X14	4
66	620 122 8397	Screw Tapping + 2.0X6.0	1
67	411 020 7007	SCR S-TPG BRZ 3X20	2
68	411 020 5904	SCR S-TPG BRZ 3X10	13
69	411 020 7700	SCR S-TPG BRZ 3X6	6
70	411 020 5508	SCR S-TPG BRZ 2.6X6	5
71	411 022 1904	SCR S-TPG FLT 2.6X6	1
72	411 031 0103	SCR BIN 2.6X3	2
73	411 031 0905	SCR BIN 2.6X4	2
74	411 030 7707	SCR BIN 2X8	2
75	411 063 7309	SCR TPG BIN 2X10	3
76	411 063 8504	SCR TPG BIN 2X8	1

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

CD MECHANISM EXPLODED VIEW



CD MECHANISM PARTS LIST

Ref. No.	Part No.	Description	Q'ty
CD MECHANISM			
	620 125 8424	Wire Band	2
1	620 062 6194	Pick-up Assy 88 C	1
2	620 015 8633	Leaf Switch	1
3	620 030 4290	Spindle Motor	1
4	620 185 9652	Motor	1
5	620 196 2697	Spring,Torsion	4
6	620 187 2699	Bracket Gear Assy	1
7	620 184 0315	Chassis	1
8	620 123 0116	Set Screw V-Cone 2X4	1
9	620 126 4050	Turntable	1
10	620 184 1596	Gear Pulley	1
11	620 184 1602	Gear Pinion	1
12	620 184 1619	Gear Load	1
13	620 187 3696	Gear Rack	1
14	620 187 2774	Belt	1
15	620 187 2811	Shaft Pick-up	2

Ref. No.	Part No.	Description	Q'ty
21	620 197 2443	Assy,PCB,Feed Pulse	1
31	411 108 0104	SCR FLT PCS 2X5	2
32	411 099 0701	SCR PAN PCS 1.7X3	2
33	411 107 6404	SCR S-TPG PAN 2.6X6	3
34	411 040 0507	SCR PAN 2.6X3	2

NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

P.C.BOARD PARTS LIST

Ref. No.	Part No.	Description	Q'ty
ASSY,PCB,MAIN			
61	620 202 1355	Assy,PCB,Main	1
	620 017 2721	Fuse Clip	8
	620 021 6838	RT Pin 0.8 X7L	10
	411 020 8004	SCR S-TPG BRZ 3X8	3
	620 197 1873	Jack,RCA,2P,Gold	1
	620 199 4742	Jack,RCA,1P,Gold	1
	620 196 1607	Converter,E/O,Totx-174	1
	620 203 1392	Label,Fuse,400mAX2	1
	620 203 1422	Label,Fuse,1.25AX2	1
	620 031 4763	Wire Wrap Terminal	14
	620 197 3716	Assy,Connector-S,6P	1
	620 197 3723	Assy,Connector-S,4P	1
	620 197 3730	Assy,Connector-S,5P	1
	620 197 3747	Assy,Connector-S,2P	1
	620 197 3754	Assy,Connector-S,3P	1
	620 196 3359	Heat Sink	2
	620 196 3342	Heat Sink	1
	620 197 9473	Heat Sink	1
⚠	423 005 7605	FUSE 250V T1.25A	2
⚠	423 003 4101	FUSE 250V T400mA	2
CL-1	620 022 3454	Terminal Lug	1
CN-GD	620 191 7079	Connector 1P Assy	1
CN-1	620 021 3950	Plug 6P	1
CN-2	620 021 4025	Plug 3P	1
CN-3	620 021 5923	Plug 3P	1
CN-4	620 021 8405	Plug 8P	1
CN-5	620 021 8337	Plug 6P	1
CN-6	620 021 5954	Plug 6P	1
CN-7	620 021 1970	Plug 2P	1
CN-8	620 021 5930	Plug 4P	1
CN-17	620 021 5947	Plug 5P	1
CN-18	620 021 9976	Plug 9P	1
CN-19	620 021 8313	Plug 3P	1
CN-20	620 021 8405	Plug 8P	1
CN-21	620 021 8399	Plug 7P	1
CN-22	620 021 8320	Plug 5P	1
CN-23	620 021 8597	Plug 4P	1
L101	620 197 9336	Inductor 100UH K	1
L102	620 026 8745	RF Filter	1
L103	620 028 8699	OSC Coil	1
L104	620 197 1897	Trans,Pulse	1
SW101	620 016 8434	Slide Switch 2P2T (Digital/Analogue SW)	1
VR101	620 006 1384	Potentiometer 220KB (Focus Offset)	1
VR102	620 006 1353	Potentiometer 100KB (Focus Gain)	1
VR103	620 006 1353	Potentiometer 100KB (E/F Balance)	1
VR104	620 006 1360	Potentiometer 22KB (Tracking Gain)	1
VR105	620 006 1384	Potentiometer 220KB (Kick Gain)	1
VR106	620 006 1384	Potentiometer 220KB (Tracking Offset)	1
XT101	620 197 1910	Resonator,Xtal,16.9344MHz	1
IC101	409 124 6507	IC LA9200NM	1
IC102	409 183 9006	IC YM3815-H	1
IC103	409 020 6205	IC LC3517AM-15	1
IC104	409 070 5401	IC NJM4558	1
IC105	409 070 5401	IC NJM4558	1
IC106	409 070 5401	IC NJM4558	1
IC107	409 070 5401	IC NJM4558	1
IC108	409 183 8504	IC STA341M	1
IC109	409 018 5500	IC LA6510	1
IC110	409 020 9800	IC LC4081B	1
IC111	409 071 9200	IC TC4075B	1
IC112	409 051 2207	IC TC4049BP	1
IC113	409 204 0609	IC YM3613C	1
IC114	409 052 1407	IC TC74HCU04P	1
IC115	409 052 8406	IC TC74HC74P	1
IC116	409 052 2206	IC TC74HC08P	1
IC117	409 052 1407	IC TC74HCU04P	1
IC118	409 169 7804	IC NJM78M05FA	1
IC119	409 050 1706	IC TA79L005P	1
IC120	409 169 7804	IC NJM78M05FA	1
IC121	409 039 9402	IC NJM78L06A	1
Q101	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q102	405 033 5006	TR 2SD1227-M	1
Q103	405 032 3102	TR 2SB911-M	1
Q104	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q105	405 034 6705	TR DTA114-EF	1
Q106	405 032 3102	TR 2SB911-M	1

Ref. No.	Part No.	Description	Q'ty
Q107	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q108	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q110	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q111	405 033 7000	TR 2SD1676	1
Q112	405 033 7000	TR 2SD1676	1
Q113	405 034 8808	TR DTC114-EF	1
Q114	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q115	405 032 3102	TR 2SB911-M	1
Q116	405 035 7107	TR 2SD1913-R	1
or	405 035 7206	TR 2SD1913-S	1
Q117	405 052 8002	TR 2SB1274-R	1
or	405 052 8101	TR 2SB1274-S	1
Q118	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q121	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q122	405 004 4502	TR 2SA608-F-NP-AA	1
D101	407 008 7305	DIODE MA700A-TA	1
or	407 008 7206	DIODE MA700	1
D102	407 000 3503	VARACTOR DI SVC211SP	1
D103	407 008 7305	DIODE MA700A-TA	1
or	407 008 7206	DIODE MA700	1
D104	407 007 9904	DIODE GMA01-BT	1
D105	407 007 9904	DIODE GMA01-BT	1
D106	407 007 9904	DIODE GMA01-BT	1
D107	407 008 7305	DIODE MA700A-TA	1
or	407 008 7206	DIODE MA700	1
D110	407 005 3805	DIODE DS442-BT	1
D111	407 092 3900	DIODE DSB15TC-KC5	1
D112	407 092 3900	DIODE DSB15TC-KC5	1
D113	407 092 3900	DIODE DSB15TC-KC5	1
D114	407 092 3900	DIODE DSB15TC-KC5	1
D115	407 005 8602	DIODE ERA15-02	1
D116	407 005 8602	DIODE ERA15-02	1
D119	407 049 5902	ZENER DIODE GZA11X	1
D120	407 049 5902	ZENER DIODE GZA11X	1
D121	407 050 2204	ZENER DIODE GZA30Y	1
D122	407 050 5502	ZENER DIODE GZA5.6Y	1
D123	407 008 7305	DIODE MA700A-TA	1
or	407 008 7305	DIODE MA700A	1
C101	403 030 6309	CERAMIC 68P J 50V	1
C102	403 057 0908	POLYESTER 0.01U K 50V	1
C103	403 001 5805	CERAMIC 0.022U N 16V	1
C104	403 038 2402	ELECT 100U M 6.3V	1
C105	403 071 2001	CERAMIC 180P K 50V	1
C106	403 048 7701	ELECT 0.47U M 50V	1
C107	403 030 6309	CERAMIC 68P J 50V	1
C108	403 038 2402	ELECT 100U M 6.3V	1
C109	403 038 2402	ELECT 100U M 6.3V	1
C110	403 048 7701	ELECT 0.47U M 50V	1
C111	403 042 0302	ELECT 10U M 16V	1
C112	403 059 5604	POLYESTER 0.022U J 50V	1
C113	403 067 6709	MT-COMPO 0.22U J 50V	1
C114	403 067 8307	MT-COMPO 0.68U J 50V	1
C115	403 044 0300	ELECT 47U M 16V	1
C116	403 044 0300	ELECT 47U M 16V	1
C117	403 085 6408	NP-ELECT 4.7U M 16V	1
C118	403 044 0300	ELECT 47U M 16V	1
C119	403 073 7004	CERAMIC 470P K 50V	1
C120	403 060 5808	POLYESTER 3300P J 50V	1
C121	403 071 6207	CERAMIC 220P K 50V	1
C122	403 087 2507	STYRENE 1000P J 50V	1
C123	403 057 0908	POLYESTER 0.01U K 50V	1
C124	403 067 5603	MT-COMPO 0.1U J 50V	1
C125	403 062 9705	POLYESTER 6800P J 50V	1
C126	403 067 5603	MT-COMPO 0.1U J 50V	1
C128	403 026 2209	CERAMIC 47P J 50V	1
C129	403 026 2209	CERAMIC 47P J 50V	1
C130	403 057 0908	POLYESTER 0.01U K 50V	1
C131	403 059 3303	POLYESTER 2200P J 50V	1
C133	403 067 6204	MT-COMPO 0.15U J 50V	1
C134	403 067 6709	MT-COMPO 0.22U J 50V	1
C135	403 067 7805	MT-COMPO 0.47U J 50V	1
C136	403 072 2703	CERAMIC 0.022U Z 50V	1
C146	403 072 4707	CERAMIC 270P K 50V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C150	403 050 1209	ELECT 2.2U M 50V	1
C151	403 038 2402	ELECT 100U M 6.3V	1
C155	403 057 7204	POLYESTER 0.012U J 50V	1
C156	403 059 3303	POLYESTER 2200P J 50V	1
C157	403 057 7204	POLYESTER 0.012U J 50V	1
C158	403 059 3303	POLYESTER 2200P J 50V	1
C159	403 086 2706	NP-ELECT 1U M 50V	1
C160	403 044 0300	ELECT 47U M 16V	1
C161	403 044 0300	ELECT 47U M 16V	1
C162	403 047 4305	ELECT 47U M 25V	1
C163	403 047 4305	ELECT 47U M 25V	1
C164	403 086 2706	NP-ELECT 1U M 50V	1
C165	403 067 5603	MT-COMPO 0.1U J 50V	1
C166	403 086 2706	NP-ELECT 1U M 50V	1
C167	403 067 5603	MT-COMPO 0.1U J 50V	1
C168	403 049 1708	ELECT 1U M 50V	1
C169	403 042 0302	ELECT 10U M 16V	1
C170	403 043 4903	ELECT 33U M 16V	1
C171	403 067 5900	MT-COMPO 0.12U J 50V	1
C172	403 047 4305	ELECT 47U M 25V	1
C173	403 072 2703	CERAMIC 0.022U Z 50V	1
C174	403 059 5604	POLYESTER 0.022U J 50V	1
C175	403 067 5702	MT-COMPO 1U J 50V	1
C176	403 044 8207	ELECT 10U M 25V	1
C177	403 038 2402	ELECT 100U M 6.3V	1
C178	403 072 2703	CERAMIC 0.022U Z 50V	1
C179	403 010 5704	CERAMIC 12P J 50V	1
C180	403 010 5704	CERAMIC 12P J 50V	1
C181	403 073 1606	CERAMIC 0.033U Z 50V	1
C182	403 047 4206	ELECT 47U M 25V	1
C183	403 063 6208	POLYESTER 8200P K 50V	1
C184	403 051 3806	ELECT 47U M 50V	1
C185	403 070 4105	CERAMIC 120P K 50V	1
C187	403 047 1502	ELECT 4.7U M 25V	1
C188	403 072 2703	CERAMIC 0.022U Z 50V	1
C189	403 038 2402	ELECT 100U M 6.3V	1
C190	403 073 1606	CERAMIC 0.033U Z 50V	1
C191	403 072 2703	CERAMIC 0.022U Z 50V	1
C192	403 072 2703	CERAMIC 0.022U Z 50V	1
C193	403 067 6204	MT-COMPO 0.15U J 50V	1
C194	403 044 8207	ELECT 10U M 25V	1
C195	403 001 5805	CERAMIC 0.022U N 16V	1
C200	620 006 8284	Capacitor 0.01MF 250V	1
C201	403 049 7304	ELECT 100U M 50V	1
C203	403 049 7304	ELECT 100U M 50V	1
C205	620 197 3143	Capacitor,4700U,25V,VX	1
C206	620 197 3143	Capacitor,4700U,25V,VX	1
C207	403 042 3600	ELECT 100U M 16V	1
C208	403 042 3600	ELECT 100U M 16V	1
C209	403 042 3600	ELECT 100U M 16V	1
C210	403 042 3600	ELECT 100U M 16V	1
C211	403 042 0302	ELECT 10U M 16V	1
C212	403 044 8207	ELECT 10U M 25V	1
C213	403 038 2402	ELECT 100U M 6.3V	1
C214	403 057 0908	POLYESTER 0.01U K 50V	1
C215	620 197 3181	Capacitor,22000U,5.5V,JB	1
C216	403 073 1606	CERAMIC 0.033U Z 50V	1
C218	403 001 5805	CERAMIC 0.022U N 16V	1
C219	403 049 1708	ELECT 1U M 50V	1
C220	403 068 9105	CERAMIC 100P K 50V	1
or	403 068 9402	CERAMIC 100P K 50V	1
C221	403 068 9105	CERAMIC 100P K 50V	1
or	403 068 9402	CERAMIC 100P K 50V	1
C222	403 072 2703	CERAMIC 0.022U Z 50V	1
C223	403 028 8001	CERAMIC 56P K 50V	1
C224	403 072 2703	CERAMIC 0.022U Z 50V	1
C225	403 072 2703	CERAMIC 0.022U Z 50V	1
C226	403 072 2703	CERAMIC 0.022U Z 50V	1
C227	403 072 2703	CERAMIC 0.022U Z 50V	1
C228	403 072 2703	CERAMIC 0.022U Z 50V	1
C230	403 072 2703	CERAMIC 0.022U Z 50V	1
R101	401 026 7408	CARBON 39K JA 1/6W	1
R102	401 027 2600	CARBON 5.6K JA 1/6W	1
R103	401 027 2303	CARBON 560 JA 1/6W	1
R104	401 026 9907	CARBON 4.7K JA 1/6W	1
R105	401 026 4902	CARBON 330K JA 1/6W	1
R106	401 027 9005	CARBON 82K JA 1/6W	1
R107	401 027 5908	CARBON 68K JA 1/6W	1
R108	401 026 4308	CARBON 3.3K JA 1/6W	1

Ref. No.	Part No.	Description	Q'ty
R109	401 026 4605	CARBON 33K JA 1/6W	1
R110	401 026 1307	CARBON 27K JA 1/6W	1
R111	401 027 2600	CARBON 5.6K JA 1/6W	1
R112	401 027 2600	CARBON 5.6K JA 1/6W	1
R113	401 026 7408	CARBON 39K JA 1/6W	1
R114	401 026 1000	CARBON 2.7K JA 1/6W	1
R115	401 027 2600	CARBON 5.6K JA 1/6W	1
R116	401 026 1307	CARBON 27K JA 1/6W	1
R117	401 026 1604	CARBON 270K JA 1/6W	1
R118	401 027 5205	CARBON 680 JA 1/6W	1
R119	401 025 0004	CARBON 120K JA 1/6W	1
R120	401 025 8208	CARBON 22K JA 1/6W	1
R121	401 027 0309	CARBON 47K JA 1/6W	1
R122	401 024 7400	CARBON 10K JA 1/6W	1
R123	401 027 6103	CARBON 680K JA 1/6W	1
R124	401 027 3201	CARBON 560K JA 1/6W	1
R125	401 025 8208	CARBON 22K JA 1/6W	1
R126	401 024 6700	CARBON 100 JA 1/6W	1
R127	401 025 0004	CARBON 120K JA 1/6W	1
R128	401 024 7400	CARBON 10K JA 1/6W	1
R129	401 027 0309	CARBON 47K JA 1/6W	1
R130	401 020 2003	CARBON 4.7K JA 1/4W	1
R131	401 027 0309	CARBON 47K JA 1/6W	1
R132	401 016 3809	CARBON 2.2K JA 1/4W	1
R133	401 026 9907	CARBON 4.7K JA 1/6W	1
R134	401 026 4308	CARBON 3.3K JA 1/6W	1
R135	401 025 7409	CARBON 220 JA 1/6W	1
R136	401 025 8208	CARBON 22K JA 1/6W	1
R137	401 014 4105	CARBON 1.5K JA 1/4W	1
R138	401 024 7707	CARBON 100K JA 1/6W	1
R139	401 012 8105	CARBON 100K JA 1/4W	1
R140	401 012 8105	CARBON 100K JA 1/4W	1
R141	401 012 7009	CARBON 10K JA 1/4W	1
R142	401 020 0801	CARBON 470 JA 1/4W	1
R143	401 025 8703	CARBON 220K JA 1/6W	1
R145	401 025 2305	CARBON 150K JA 1/6W	1
R146	401 024 7707	CARBON 100K JA 1/6W	1
R147	401 024 7004	CARBON 1K JA 1/6W	1
R148	401 026 0607	CARBON 270 JA 1/6W	1
R149	401 026 7408	CARBON 39K JA 1/6W	1
R150	401 027 2600	CARBON 5.6K JA 1/6W	1
R151	401 024 9701	CARBON 12K JA 1/6W	1
R152	401 027 2600	CARBON 5.6K JA 1/6W	1
R153	401 024 7400	CARBON 10K JA 1/6W	1
R154	401 025 1902	CARBON 15K JA 1/6W	1
R155	401 026 1307	CARBON 27K JA 1/6W	1
R156	401 016 4806	CARBON 22K JA 1/4W	1
R157	401 016 4806	CARBON 22K JA 1/4W	1
R161	401 025 8208	CARBON 22K JA 1/6W	1
R162	401 027 9005	CARBON 82K JA 1/6W	1
R163	401 024 7400	CARBON 10K JA 1/6W	1
R164	401 023 3700	CARBON 82K JA 1/4W	1
R165	401 027 5205	CARBON 680 JA 1/6W	1
R166	401 024 7400	CARBON 10K JA 1/6W	1
R167	401 027 0309	CARBON 47K JA 1/6W	1
R168	401 027 0309	CARBON 47K JA 1/6W	1
R169	401 012 7009	CARBON 10K JA 1/4W	1
R170	401 024 7400	CARBON 10K JA 1/6W	1
R171	401 024 9305	CARBON 1.2K JA 1/6W	1
R172	401 026 7408	CARBON 39K JA 1/6W	1
R173	401 016 4806	CARBON 22K JA 1/4W	1
R174	401 012 8105	CARBON 100K JA 1/4W	1
R175	401 012 8105	CARBON 100K JA 1/4W	1
R176	401 024 7707	CARBON 100K JA 1/6W	1
R181	401 024 7707	CARBON 100K JA 1/6W	1
R182	401 025 8703	CARBON 220K JA 1/6W	1
R183	401 025 8703	CARBON 220K JA 1/6W	1
R184	401 025 8703	CARBON 220K JA 1/6W	1
R185	401 025 0202	CARBON 1.2M JA 1/6W	1
R186	401 027 3201	CARBON 560K JA 1/6W	1
R187	401 025 8208	CARBON 22K JA 1/6W	1
R188	401 025 3807	CARBON 180 JA 1/6W	1
R189	401 027 0507	CARBON 470K JA 1/6W	1
R192	401 024 7707	CARBON 100K JA 1/6W	1
R193	401 012 8105	CARBON 100K JA 1/4W	1
R194	401 027 3201	CARBON 560K JA 1/6W	1
R195	401 027 3003	CARBON 56K JA 1/6W	1
R196	401 027 3201	CARBON 560K JA 1/6W	1
R197	401 026 1307	CARBON 27K JA 1/6W	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
R198	401 026 1307	CARBON 27K JA 1/6W	1
R199	401 025 7805	CARBON 2.2K JA 1/6W	1
R200	401 025 3807	CARBON 180 JA 1/6W	1
R201	401 015 6504	CARBON 2.2 JA 1/4W	1
R202	401 025 8703	CARBON 220K JA 1/6W	1
R205	401 053 6504	MT-FILM 91K FA 1/6W	1
R206	401 053 6504	MT-FILM 91K FA 1/6W	1
R207	401 148 7102	MT-FILM 1.5 FA 1/6W	1
R208	401 053 4708	MT-FILM 6.8K FA 1/6W	1
R209	401 148 7201	MT-FILM 1.8K FA 1/6W	1
R210	401 053 4708	MT-FILM 6.8K FA 1/6W	1
R211	401 052 9803	MT-FILM 180 FA 1/6W	1
R212	401 025 5405	CARBON 2.2 JA 1/6W	1
R213	401 024 6403	CARBON 10 JA 1/6W	1
R214	401 025 0004	CARBON 120K JA 1/6W	1
R215	401 025 0004	CARBON 120K JA 1/6W	1
R216	401 053 4708	MT-FILM 6.8K FA 1/6W	1
R217	401 053 4708	MT-FILM 6.8K FA 1/6W	1
R218	401 148 7102	MT-FILM 1.5 FA 1/6W	1
R219	401 148 7201	MT-FILM 1.8K FA 1/6W	1
R220	401 052 9803	MT-FILM 180 FA 1/6W	1
R221	401 025 5405	CARBON 2.2 JA 1/6W	1
R222	401 024 6403	CARBON 10 JA 1/6W	1
R223	401 012 5708	CARBON 1K JA 1/4W	1
R224	401 012 5708	CARBON 1K JA 1/4W	1
R225	401 025 8703	CARBON 220K JA 1/6W	1
R226	401 025 8208	CARBON 22K JA 1/6W	1
R227	401 025 8703	CARBON 220K JA 1/6W	1
R228	401 026 1307	CARBON 27K JA 1/6W	1
R229	401 012 4503	CARBON 100 JA 1/4W	1
R230	401 012 5708	CARBON 1K JA 1/4W	1
R231	401 025 3807	CARBON 180 JA 1/6W	1
R232	401 025 1605	CARBON 1.5K JA 1/6W	1
R233	401 025 1605	CARBON 1.5K JA 1/6W	1
R234	401 025 1605	CARBON 1.5K JA 1/6W	1
R235	401 024 8001	CARBON 1M JA 1/6W	1
R236	401 012 4503	CARBON 100 JA 1/4W	1
R237	401 027 0309	CARBON 47K JA 1/6W	1
R238	401 025 4606	CARBON 18K JA 1/6W	1
R239	401 027 0309	CARBON 47K JA 1/6W	1
R240	401 026 4902	CARBON 330K JA 1/6W	1
R241	401 025 8208	CARBON 22K JA 1/6W	1
R242	401 025 3807	CARBON 180 JA 1/6W	1
R243	401 027 8602	CARBON 8.2K JA 1/6W	1
R244	401 027 2105	CARBON 56 JA 1/6W	1
R245	401 027 6608	CARBON 75 JA 1/6W	1
R246	401 148 7508	MT-FILM 100 GC 1/4W	1
R247	401 148 7508	MT-FILM 100 GC 1/4W	1
R248	401 024 6700	CARBON 100 JA 1/6W	1
R249	401 024 6700	CARBON 100 JA 1/6W	1
R250	401 027 0309	CARBON 47K JA 1/6W	1
R260	402 015 4606	FUSIBLE RES 4.7 J- 1/4W	1
R261	402 015 4606	FUSIBLE RES 4.7 J- 1/4W	1
R262	401 055 9206	OXIDE-MT 33 JA 1/2W	1
R263	401 025 4200	CARBON 1.8K JA 1/6W	1
R264	401 012 7009	CARBON 10K JA 1/4W	1
R265	401 022 1905	CARBON 680 JA 1/4W	1
R266	401 022 1905	CARBON 680 JA 1/4W	1
R267	402 016 5404	FUSIBLE RES 4.7 J- 1/2W	1
R268	402 016 5404	FUSIBLE RES 4.7 J- 1/2W	1
R269	401 024 6700	CARBON 100 JA 1/6W	1
R271	401 025 8208	CARBON 22K JA 1/6W	1
R272	401 025 8208	CARBON 22K JA 1/6W	1
R273	401 025 8208	CARBON 22K JA 1/6W	1
R274	401 016 4806	CARBON 22K JA 1/4W	1
R275	401 024 8001	CARBON 1M JA 1/6W	1
R277	401 013 7305	CARBON 120K JA 1/4W	1
ASSY,PCB,AUDIO			
62	620 197 2276	Assy,PCB,Audio	1
	411 002 9104	SCR PAN 3X8	2
	620 196 3366	Heat Sink	1
CN12	620 021 6579	Plug 6P	1
CN13	620 021 6555	Plug 4P	1
CN14	620 021 6562	Plug 5P	1
CN15	620 021 1970	Plug 2P	1
CN16	620 021 5923	Plug 3P	1
IP301	620 017 0734	Protector ICP-5	1
IP302	620 017 0734	Protector ICP-5	1

Ref. No.	Part No.	Description	Q'ty
LY301	620 196 1744	Relay,U T-Cross DC24V	1
LY302	620 196 1744	Relay,U T-Cross DC24V	1
L301	620 197 9534	Inductor 100UH K	1
L302	620 197 9534	Inductor 100UH K	1
SC301	620 197 2467	Delay Line,SC-1500	1
SC302	620 200 4501	Delay Line,SC-1500Y	1
VR301	620 006 2343	Potentiometer 100KB	1
VR302	620 006 2343	Potentiometer 100KB	1
XT301	620 197 2160	Resonator,19.7568MHz	1
IC301	409 070 4404	IC NJM2043DD	1
IC302	409 169 7804	IC NJM78M05FA	1
IC303	409 108 6004	IC NJM431L	1
IC304	409 180 3007	IC YM3434	1
IC305	409 183 7903	IC MC74HC14AN	1
IC306	409 052 1407	IC TC74HCU04P	1
IC307	409 052 1407	IC TC74HCU04P	1
IC308	409 171 1500	IC PCM58P	1
IC309	409 171 1500	IC PCM58P	1
IC310	409 180 3205	IC NJM4580D	1
IC311	409 180 3205	IC NJM4580D	1
Q301	405 019 2708	TR 2SC536-F-NP-AA	1
or	405 019 3804	TR 2SC536-G-NP-AA	1
Q302	405 035 7107	TR 2SD1913-R	1
or	405 035 7206	TR 2SD1913-S	1
Q303	405 052 8002	TR 2SB1274-R	1
or	405 052 8101	TR 2SB1274-S	1
Q304	405 027 0505	TR 2SK246-GR	1
Q305	405 027 0505	TR 2SK246-GR	1
Q306	405 034 8808	TR DTC114-EF	1
Q307	405 034 6705	TR DTA114-EF	1
Q308	405 034 8808	TR DTC114-EF	1
Q309	405 034 6705	TR DTA114-EF	1
D301	407 005 8602	DIODE ERA15-02	1
D302	407 005 8602	DIODE ERA15-02	1
D303	407 050 7308	ZENER DIODE GZA8.2Y-BT	1
D304	407 003 5306	DIODE DBA10B	1
D305	407 049 6305	ZENER DIODE GZA12Y-BT	1
D306	407 049 6305	ZENER DIODE GZA12Y-BT	1
D307	407 008 0405	DIODE GMB01-BT	1
D308	407 008 0405	DIODE GMB01-BT	1
D309	407 050 5502	ZENER DIODE GZA5.6Y-BT	1
C301	403 177 1304	ELECT 1U M 50V	1
C302	403 066 2504	MT-POLYEST 0.1U M 250V	1
C303	620 197 2122	Capacitor,3300U,25V,GS	1
C304	620 197 2122	Capacitor,3300U,25V,GS	1
C305	403 177 4800	ELECT 33U M 16V	1
C306	403 177 4800	ELECT 33U M 16V	1
C307	403 177 4909	ELECT 330U M 16V	1
C308	403 177 4909	ELECT 330U M 16V	1
C309	403 177 4800	ELECT 33U M 16V	1
C310	403 001 1906	CERAMIC 0.01U M 16V	1
C311	403 177 4701	ELECT 100U M 16V	1
C312	403 044 0300	ELECT 47U M 16V	1
C313	403 013 7705	CERAMIC 16P J 50V	1
C314	403 013 7705	CERAMIC 16P J 50V	1
C315	403 177 1007	ELECT 100U M 6.3V	1
C316	403 177 4800	ELECT 33U M 16V	1
C317	403 024 1501	CERAMIC 39P J 50V	1
C318	403 024 1501	CERAMIC 39P J 50V	1
C319	403 024 1501	CERAMIC 39P J 50V	1
C320	403 024 1501	CERAMIC 39P J 50V	1
C321	403 177 1403	ELECT 3.3U M 50V	1
C322	403 177 1403	ELECT 3.3U M 50V	1
C323	403 177 1403	ELECT 3.3U M 50V	1
C324	403 177 1403	ELECT 3.3U M 50V	1
C325	403 067 5603	MT-COMPO 0.1U J 50V	1
C326	403 067 5603	MT-COMPO 0.1U J 50V	1
C327	403 177 1403	ELECT 3.3U M 50V	1
C328	403 177 1403	ELECT 3.3U M 50V	1
C329	403 177 4701	ELECT 100U M 16V	1
C330	403 177 4701	ELECT 100U M 16V	1
C331	403 177 1403	ELECT 3.3U M 50V	1
C332	403 177 1403	ELECT 3.3U M 50V	1
C333	403 177 1403	ELECT 3.3U M 50V	1
C334	403 177 1403	ELECT 3.3U M 50V	1
C335	403 177 1403	ELECT 3.3U M 50V	1
C336	403 177 1403	ELECT 3.3U M 50V	1
C337	403 177 1403	ELECT 3.3U M 50V	1
C338	403 093 5806	OS-SOLID 6.8U M 6.3V	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
C339	403 177 5401	POLYPRO 470P J 50V	1
C340	403 177 5401	POLYPRO 470P J 50V	1
C341	403 177 5203	POLYPRO 2000P J 50V	1
C342	403 177 5203	POLYPRO 2000P J 50V	1
C343	403 177 5609	POLYPRO 820P J 50V	1
C344	403 177 5609	POLYPRO 820P J 50V	1
C345	403 177 5302	POLYPRO 0.027U J 50V	1
C346	403 177 5302	POLYPRO 0.027U J 50V	1
C347	403 177 1502	POLYPRO 0.01U J 50V	1
C348	403 177 1502	POLYPRO 0.01U J 50V	1
C349	403 177 5708	NP-ELECT 22U M 16V	1
C350	403 177 5708	NP-ELECT 22U M 16V	1
C351	403 177 4701	ELECT 100U M 16V	1
C352	403 177 4701	ELECT 100U M 16V	1
C353	403 093 5806	OS-SOLID 6.8U M 6.3V	1
C354	403 177 1007	ELECT 100U M 6.3V	1
C355	403 070 7809	CERAMIC 150P K 50V	1
C356	403 001 1906	CERAMIC 0.01U M 16V	1
C357	403 001 1906	CERAMIC 0.01U M 16V	1
C358	403 001 1906	CERAMIC 0.01U M 16V	1
C359	403 001 5805	CERAMIC 0.022U N 16V	1
C360	403 001 5805	CERAMIC 0.022U N 16V	1
R301	401 016 4806	CARBON 22K JA 1/4W	1
R302	401 025 8208	CARBON 22K JA 1/6W	1
R303	401 012 7009	CARBON 10K JA 1/4W	1
R304	401 148 7904	MT-FILM 3K GC 1/4W	1
R305	401 148 7904	MT-FILM 3K GC 1/4W	1
R306	401 148 7904	MT-FILM 3K GC 1/4W	1
R307	401 148 7904	MT-FILM 3K GC 1/4W	1
R308	401 055 3204	OXIDE-MT 180 JA 1/2W	1
R309	401 148 7607	MT-FILM 10K GC 1/4W	1
R310	401 148 7607	MT-FILM 10K GC 1/4W	1
R311	402 015 3005	FUSIBLE RES 10 J- 1/4W	1
R312	402 015 3005	FUSIBLE RES 10 J- 1/4W	1
R313	401 024 8001	CARBON 1M JA 1/6W	1
R314	401 024 6700	CARBON 100 JA 1/6W	1
R315	401 024 6700	CARBON 100 JA 1/6W	1
R316	401 024 6700	CARBON 100 JA 1/6W	1
R317	401 028 0308	CARBON 91K JA 1/6W	1
R318	401 086 5802	MT-FILM 2.7K FA 1/6W	1
R319	401 026 5503	CARBON 360 JA 1/6W	1
R320	401 024 9305	CARBON 1.2K JA 1/6W	1
R321	401 028 0308	CARBON 91K JA 1/6W	1
R322	401 151 0800	MT-FILM 1.6K FA 1/6W	1
R323	401 052 9803	MT-FILM 180 FA 1/6W	1
R324	401 026 8504	CARBON 430 JA 1/6W	1
R325	401 028 0308	CARBON 91K JA 1/6W	1
R326	401 151 0800	MT-FILM 1.6K FA 1/6W	1
R327	401 052 9803	MT-FILM 180 FA 1/6W	1
R328	401 053 3008	MT-FILM 470 FA 1/6W	1
R329	401 028 0308	CARBON 91K JA 1/6W	1
R330	401 151 0800	MT-FILM 1.6K FA 1/6W	1
R331	401 052 9803	MT-FILM 180 FA 1/6W	1
R332	401 053 3008	MT-FILM 470 FA 1/6W	1
R333	401 148 9106	MT-FILM 1K GC 1/4W	1
R334	401 148 9106	MT-FILM 1K GC 1/4W	1
R335	401 018 5801	CARBON 330K JA 1/4W	1
R336	401 018 5801	CARBON 330K JA 1/4W	1
R337	401 148 7904	MT-FILM 3K GC 1/4W	1
R338	401 148 7904	MT-FILM 3K GC 1/4W	1
R339	401 148 8208	MT-FILM 620 GC 1/4W	1
R340	401 148 8208	MT-FILM 620 GC 1/4W	1
R341	401 148 8208	MT-FILM 620 GC 1/4W	1
R342	401 148 8208	MT-FILM 620 GC 1/4W	1
R343	401 148 7706	MT-FILM 1.2K GC 1/4W	1
R344	401 148 7706	MT-FILM 1.2K GC 1/4W	1
R345	401 148 8109	MT-FILM 510 GC 1/4W	1
R346	401 148 8109	MT-FILM 510 GC 1/4W	1
R347	401 012 9300	CARBON 1M JA 1/4W	1
R348	401 012 9300	CARBON 1M JA 1/4W	1
R349	401 148 8000	MT-FILM 47K GC 1/4W	1
R350	401 148 8000	MT-FILM 47K GC 1/4W	1
R351	401 148 7508	MT-FILM 100 GC 1/4W	1
R352	401 148 7508	MT-FILM 100 GC 1/4W	1
ASSY,PCB,AUDIO SUB			
63	620 197 2313	Assy,PCB,Audio Sub	1
TML1	620 182 9075	Pin Plug 3P	1
TML2	620 182 9075	Pin Plug 3P	1

Ref. No.	Part No.	Description	Q'ty
ASSY,PCB,HEADPHONE			
64	620 197 2344	Assy,PCB,Headphone	1
	620 197 3655	Assy,Connector-S,3P	1
	620 197 3761	Assy,Connector-S,4P	1
CL-1	620 022 3454	Terminal Lug	1
HP401	620 196 3960	Jack,H/P,6.3D,Gold	1
VR401	620 197 2603	VR,Rotary,2X20KA	1
IC401	409 039 7309	IC NJM4556S	1
C401	403 050 1209	ELECT 2.2U M 50V	1
C402	403 050 1209	ELECT 2.2U M 50V	1
C403	403 044 0300	ELECT 47U M 16V	1
C404	403 044 0300	ELECT 47U M 16V	1
C405	403 067 7706	MT-COMPO 0.047U J 50V	1
C406	403 067 7706	MT-COMPO 0.047U J 50V	1
C407	403 072 2703	CERAMIC 0.022U Z 50V	1
C408	403 072 2703	CERAMIC 0.022U Z 50V	1
C409	403 072 2703	CERAMIC 0.022U Z 50V	1
C410	403 033 7303	CERAMIC 82P K 50V	1
R401	401 024 7004	CARBON 1K JA 1/6W	1
R402	401 024 7004	CARBON 1K JA 1/6W	1
R403	401 024 7004	CARBON 1K JA 1/6W	1
R404	401 024 7004	CARBON 1K JA 1/6W	1
R405	401 024 9701	CARBON 12K JA 1/6W	1
R406	401 024 9701	CARBON 12K JA 1/6W	1
R407	401 027 0309	CARBON 47K JA 1/6W	1
R408	401 027 0309	CARBON 47K JA 1/6W	1
R409	401 024 6700	CARBON 100 JA 1/6W	1
R410	401 024 6700	CARBON 100 JA 1/6W	1
ASSY,PCB,POWER			
65	620 197 2368	Assy,PCB,Power	1
	620 022 2587	EC Terminal 1P	2
	620 196 8873	Filter,LC,AC Line	1
	620 031 4763	Wire Wrap Terminal	3
ASSY,PCB,CONTROL			
66	620 197 3617	Assy,PCB,Control	1
	620 021 6838	RT Pin 0.8 X7L	7
	620 197 4386	Socket,64P	1
	620 125 8424	Wire Band	2
	620 198 8000	Assy,Connector-P,3P	1
CN9	620 021 6234	Plug 7P	1
CN10	620 021 8610	Plug 6P	1
CN11	620 021 8597	Plug 4P	1
CN18	620 197 3778	Assy,Connector-S,9P	1
CN19	620 197 3785	Assy,Connector-S,3P	1
CN20	620 197 3808	Assy,Connector-S,8P	1
CN21	620 197 3815	Assy,Connector-S,7P	1
CN22	620 197 3822	Assy,Connector-S,5P	1
CN23	620 197 3839	Assy,Connector-S,4P	1
CN24	620 021 8337	Plug 6P	1
CN25	620 021 8306	Plug 2P	1
CN26	620 197 4355	Plug,12P	1
CN27	620 197 4355	Plug,12P	1
CN28	620 021 8443	Plug 8P	1
CN29	620 197 4355	Plug,12P	1
CN30	620 197 4362	Plug,14P	1
CN31	620 021 8313	Plug 3P	1
RA501	620 004 5247	Resistor 4X22K J	1
RA502	620 004 5162	Resistor 8X22K J	1
RA503	620 004 5162	Resistor 8X22K J	1
RA504	620 004 5247	Resistor 4X22K J	1
RA505	620 004 5582	Resistor 6X22K J	1
IC501	409 186 6507	IC LC6538D-4130	1
IC502	409 189 1509	IC M50754-156FP	1
or	410 072 2305	IC M50957EFP156	1
IC503	409 128 0105	IC LC3517BML-15	1
IC504	409 087 1304	IC LC74HC241	1
IC506	409 140 2705	IC LA6501-LR	1
IC507	409 052 1407	IC TC74HCU04P	1
Q501	405 003 7900	TR 2SA1348	1
Q502	405 018 2600	TR 2SC3400	1
Q503	405 003 7702	TR 2SA1346	1
Q504	405 003 7702	TR 2SA1346	1
Q505	405 021 0204	TR 2SD1012-F-SPA	1
Q506	405 007 6701	TR 2SB598-F-NP	1
Q508	405 018 2600	TR 2SC3400	1
Q509	405 019 3903	TR 2SC536-G-SPA	1
Q510	405 018 2600	TR 2SC3400	1

P.C.BOARD PARTS LIST (Continued)

Ref. No.	Part No.	Description	Q'ty
D501	407 008 0405	DIODE GMB01-BT	1
D502	407 008 0405	DIODE GMB01-BT	1
D503	407 008 0405	DIODE GMB01-BT	1
D505	407 008 0405	DIODE GMB01-BT	1
D506	407 008 0405	DIODE GMB01-BT	1
D508	407 008 0405	DIODE GMB01-BT	1
D510	407 008 0405	DIODE GMB01-BT	1
D512	407 008 0405	DIODE GMB01-BT	1
D514	407 008 0405	DIODE GMB01-BT	1
D516	407 008 0405	DIODE GMB01-BT	1
D518	407 008 0405	DIODE GMB01-BT	1
D520	407 008 0405	DIODE GMB01-BT	1
D526	407 008 0405	DIODE GMB01-BT	1
D528	407 049 5506	ZENER DIODE GZA10Y	1
D529	407 008 0405	DIODE GMB01	1
D532	407 008 0405	DIODE GMB01	1
C501	403 044 0706	ELECT 47U M 16V	1
C502	403 047 4404	ELECT 47U M 25V	1
C503	403 086 2805	NP-ELECT 1U M 50V	1
C504	403 067 5603	MT-COMPO 0.1U J 50V	1
C506	403 043 8802	ELECT 4.7U M 16V	1
C508	403 179 4808	ELECT 22U M 16V	1
C509	403 039 8106	ELECT 100U M 10V	1
C510	403 002 3602	CERAMIC 0.1U K 25V	1
C511	403 002 3602	CERAMIC 0.1U K 25V	1
C512	403 039 8106	ELECT 100U M 10V	1
C513	403 067 5603	MT-COMPO 0.1U J 50V	1
C514	403 004 0500	CERAMIC 0.047U K 25V	1
C515	403 067 7805	MT-COMPO 0.47U J 50V	1
R501	401 025 8703	CARBON 220K JA 1/6W	1
R502	401 024 7004	CARBON 1K JA 1/6W	1
R503	401 027 0309	CARBON 47K JA 1/6W	1
R504	401 024 8001	CARBON 1M JA 1/6W	1
R505	401 024 7004	CARBON 1K JA 1/6W	1
R506	401 026 1604	CARBON 270K JA 1/6W	1
R507	401 024 7400	CARBON 10K JA 1/6W	1
R508	401 025 8208	CARBON 22K JA 1/6W	1
R509	401 022 1905	CARBON 680 JA 1/4W	1
R510	401 027 0309	CARBON 47K JA 1/6W	1
R511	401 027 0309	CARBON 47K JA 1/6W	1
R512	401 027 5205	CARBON 680 JA 1/6W	1
R513	401 027 5502	CARBON 6.8K JA 1/6W	1
R514	401 025 3807	CARBON 180 JA 1/6W	1
R515	401 026 1604	CARBON 270K JA 1/6W	1
R516	401 026 1604	CARBON 270K JA 1/6W	1
R517	401 027 5502	CARBON 6.8K JA 1/6W	1
R518	401 012 1106	CARBON 1.5 JA 1/4W	1
R520	401 024 6700	CARBON 100 JA 1/6W	1
R521	401 025 8208	CARBON 22K JA 1/6W	1
R522	401 025 8208	CARBON 22K JA 1/6W	1
R523	401 024 7400	CARBON 10K JA 1/6W	1
R524	401 024 7707	CARBON 100K JA 1/6W	1
R525	401 025 8208	CARBON 22K JA 1/6W	1
R526	401 024 6403	CARBON 10 JA 1/6W	1
R527	401 025 1605	CARBON 1.5K JA 1/6W	1
R528	401 024 7400	CARBON 10K JA 1/6W	1
R529	401 024 7400	CARBON 10K JA 1/6W	1
R531	401 025 8208	CARBON 22K JA 1/6W	1
R532	401 025 8208	CARBON 22K JA 1/6W	1
ASSY,PCB,DISPLAY			
67	620 197 3624	Assy,PCB,Display	1
	620 198 0820	Reflector	1
	620 196 4202	Spacer,PCB	4
	620 196 2581	Cushion,Rubber	1
	620 197 4683	Switch,Tact	35
	620 197 2566	Fluorescent Tube	1
	620 062 1564	Tape Acetate	
	620 124 4601	Cushion	2
	620 197 4225	Assy,Connector-P,12P	1
	620 197 4225	Assy,Connector-P,12P	1
	620 197 4232	Assy,Connector-P,8P	1
	620 197 4249	Assy,Connector-P,12P	1
	620 197 4263	Assy,Connector-P,14P	1
	407 088 6601	SENSOR BX-1407	1
Q507	405 003 7702	TR 2SA1346	1
D504	407 007 9904	DIODE GMA01-BT	1
D507	407 007 9904	DIODE GMA01-BT	1
D509	407 007 9904	DIODE GMA01-BT	1

Ref. No.	Part No.	Description	Q'ty
D511	407 007 9904	DIODE GMA01-BT	1
D513	407 007 9904	DIODE GMA01-BT	1
D515	407 007 9904	DIODE GMA01-BT	1
D517	407 007 9904	DIODE GMA01-BT	1
D519	407 007 9904	DIODE GMA01-BT	1
D521	407 007 9904	DIODE GMA01-BT	1
D522	407 007 9904	DIODE GMA01-BT	1
D523	407 007 9904	DIODE GMA01-BT	1
D524	407 007 9904	DIODE GMA01-BT	1
D525	407 007 9904	DIODE GMA01-BT	1
D527	407 007 9904	DIODE GMA01-BT	1
D530	407 109 6801	LED SEL1813A	1
C505	403 039 6409	ELECT 10U M 10V	1
R519	401 026 3905	CARBON 330 JA 1/6W	1
ASSY,PCB,LED			
51	620 079 3001	Assy,PCB,LED	1
D502	407 063 2604	LED SLR-34VC3-N,P	1
R501	401 025 3807	CARBON 180 JA 1/6W	1
R503	401 025 3807	CARBON 180 JA 1/6W	1
R502	401 026 4605	CARBON 33K JA 1/6W	1
ASSY,PCB,PHOTO TRANSISTOR			
52	620 079 3018	Assy,PCB,Photo Transistor	1
Q501	407 063 5704	PHOTO DIODE TPS606	1
ASSY,PCB,PHOTO SENSOR			
53	620 079 3025	Assy,PCB,Photo Sensor	1
D501	407 060 9002	PHOTO COUPLE TLP802	1
ASSY,PCB,8CM LED			
54	620 197 2399	Assy,PCB,8CM LED	1
D701	407 108 1302	LED TLN104-B (SAN)	1
D702	407 108 1302	LED TLN104-B (SAN)	1
R701	401 018 7607	CARBON 360 JA 1/4W	1
R702	401 018 7607	CARBON 360 JA 1/4W	1
ASSY,PCB,8CM SENSOR			
55	620 197 2412	Assy,PCB,8CM Sensor	1
Q801	407 108 1401	PHOTO DIODE TPS606-C (SAN)	1

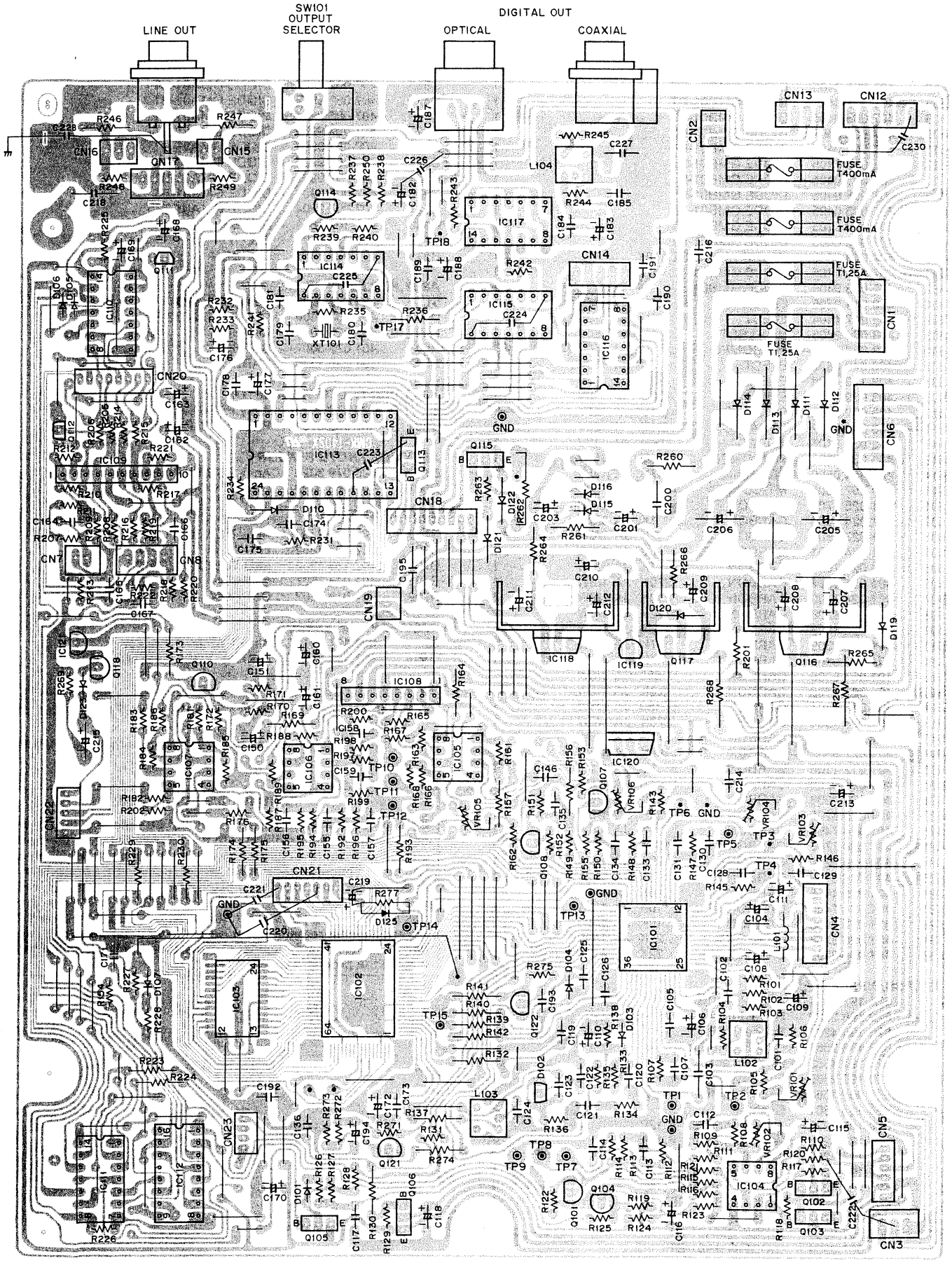
NOTES:

1. Parts order must contain Model Number, Part Number and Description.
2. Ordering quantity of screws and resistors must be multiple of 10 pcs.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CD MAIN P.C.BOARD
(BOTTOM VIEW)



REFERENCE VOLTAGE (CD Main P.C.Board Section)

IC PIN NUMBERS DC VOLTAGES

Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC101	LA9200NM	0V	0V	0V	0.4V	0V	0V	0V	0.4V	0.5V	0V	0V	0V	0V	0V	0V	0V	4.2V	4.2V	−4.9V	1.2V
		21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
		4.9V	2.1V	2.1V	0.4V	0V	2.4V	0V	2.4V	2.4V	0V	0V	0.5V	0V	0V	0V	0V	0V	3.8V	0V	4.9V
		41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
		0V	0V	−4.9V	0V	0V	0V	0V	0V	–	–	–	–	–	–	–	–	–	–	–	–
IC102	YM3815H	4.9V	2.2V	2.2V	2.4V	0V	0V	0V	2.1V	0V	0V	0V	0V	0V	4.2V	4.2V	4.2V	0V	4.8V	0V	4.9V
		21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
		0V	0V	0V	4.9V	0V	0V	1.7V	0.1V	0.2V	1.6V	1.0V	4.9V	4.5V	0V	0V	0V	0V	4.9V	4.9V	2.4V
		41	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**	**60**
		0V	0V	2.4V	0V	0V	2.4V	2.4V	0V	2.5V	2.6V	4.6V	2.8V	1.7V	0.9V	0.9V	0V	0V	0V	0V	0V
		61	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**	**80**
		0V	0V	3.2V	3.2V	0V	0V	2.4V	1.7V	4.8V	4.8V	4.8V	0V	3.2V	4.8V	4.8V	1.6V	1.6V	0V	1.7V	1.8V
IC103	LC3517AM	2.3V	2.3V	2.3V	2.1	1.0V	2.3V	2.3V	2.3V	4.2V	1.1V	4.0V	0V	3.9V	3.9V	0.9V	0.9V	0.8V	0V	2.8V	2.8V
		21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
		4.5V	2.7V	2.5V	4.9V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC104	NJM4558	−0.5V	0V	0V	−10.3V	0V	0V	0V	10.1V	–	–	–	–	–	–	–	–	–	–	–	–
IC105	NJM4558	0V	0V	0V	−10.3V	0V	0V	−0.5V	10.1V	–	–	–	–	–	–	–	–	–	–	–	–
IC106	NJM4558	0.6V	0V	0V	−10.3V	0V	0V	−0.5V	10.1V	–	–	–	–	–	–	–	–	–	–	–	–
IC107	NJM4558	0V	0V	0V	−10.3V	0V	0V	0V	10.1V	–	–	–	–	–	–	–	–	–	–	–	–
IC108	STA341M	10.1V	−0.5V	0.5V	0V	−10.3V	0V	0V	0V	–	–	–	–	–	–	–	–	–	–	–	–
IC109	LA6510	0V	0V	0.1V	0V	−16.0V	0V	0.1V	0V	0V	15.5V	–	–	–	–	–	–	–	–	–	–
IC110	LC4081B	4.9V	4.9V	4.9V	0V	4.9V	0V	0V	0V	4.9V	0V	0.1V	0V	0V	4.9V	–	–	–	–	–	–
IC111	TC4075B	0V	0V	0V	4.8V	0V	4.9V	0V	0V	0V	4.8V	4.9V	4.9V	0V	4.9V	–	–	–	–	–	–
IC112	TC4049BP	4.9V	4.9V	0V	4.8V	0V	0V	4.8V	0V	0.5V	4.9V	4.9V	0V	0V	4.9V	0V	0V	–	–	–	–
IC113	YM3613B	4.9V	0V	2.3V	1.1V	0.6V	4.8V	2.1V	1.8V	2.4V	0V	4.8V	0V	4.5V	0.2V	1.6V	0V	3.2V	2.4V	1.4V	1.8V
		21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
		0V	0V	1.3V	4.8V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

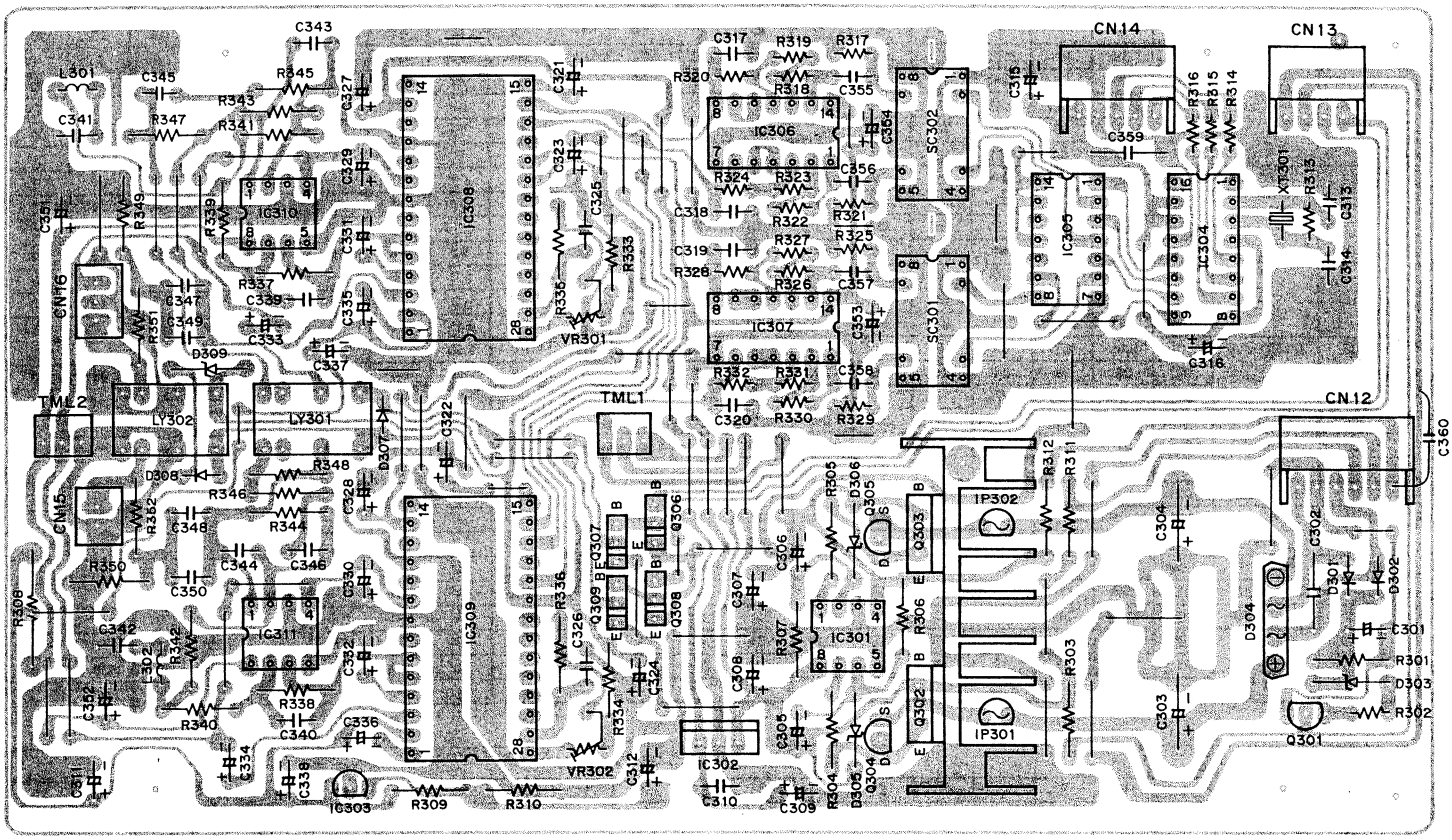
IC PIN NUMBERS DC VOLTAGES

Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC114	TC74HCU04P	4.9V	0V	0V	4.9V	4.9V	0V	0V	2.3V	2.3V	2.3V	2.5V	2.5V	2.5V	4.9V	–	–	–	–	–	–
IC115	TC74HC74P	0V	2.2V	2.3V	4.9V	0V	4.9V	0V	0V	4.9V	4.9V	2.4V	4.9V	4.9V	4.9V	–	–	–	–	–	–
IC116	TC74HC08P	4.9V	4.9V	4.9V	1.8V	4.9V	2.3V	0V	0V	0V	4.9V	0V	2.4V	4.9V	4.9V	–	–	–	–	–	–
IC117	TC74HCU04P	0V	4.9V	4.9V	0V	4.9V	0V	0V	0V	4.9V	0V	4.9V	0V	4.9V	4.9V	–	–	–	–	–	–
IC118	NJM78M05FA	4.9V	0V	10.1V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC119	TA79L005P	−4.9V	0V	−10.3V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC120	NJM78M05FA	4.9V	0V	15.5V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC121	NJM78L06A	5.8V	10.1V	0V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–

TRANSISTOR DC VOLTAGES

Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E
Q101	2SC536	0V	0V	0V	Q108	2SC536	0V	0V	0V	Q116	2SD1913	10.8V	15.7V	10.1V
Q102	2SD1227	−0.5V	0V	0V	Q110	2SC536	0V	0V	0V	Q117	2SB1274	−10.9V	−16.3V	−10.3V
Q103	2SB911	−0.5V	0V	0V	Q111	2SD1676	0V	0V	0V	Q118	2SC536	5.8V	5.2V	5.2V
Q104	2SC536	0.6V	0V	0V	Q112	2SD1676	0V	0V	0V	Q121	2SC536	10.2V	0V	5.8V
Q105	DTA114	0V	4.9V	4.9V	Q113	DTC114	0V	0.1V	0V	Q122	2SA608	1.7V	0V	2.1V
Q106	2SB911	4.6V	0V	4.9V	Q114	2SC536	0V	4.9V	0V					
Q107	2SC536	0.6V	0V	0V	Q115	2SB911	0V	−57.4V	0V					

AUDIO P.C.BOARD
(BOTTOM VIEW)



REFERENCE VOLTAGE (Audio P.C.Board Section)

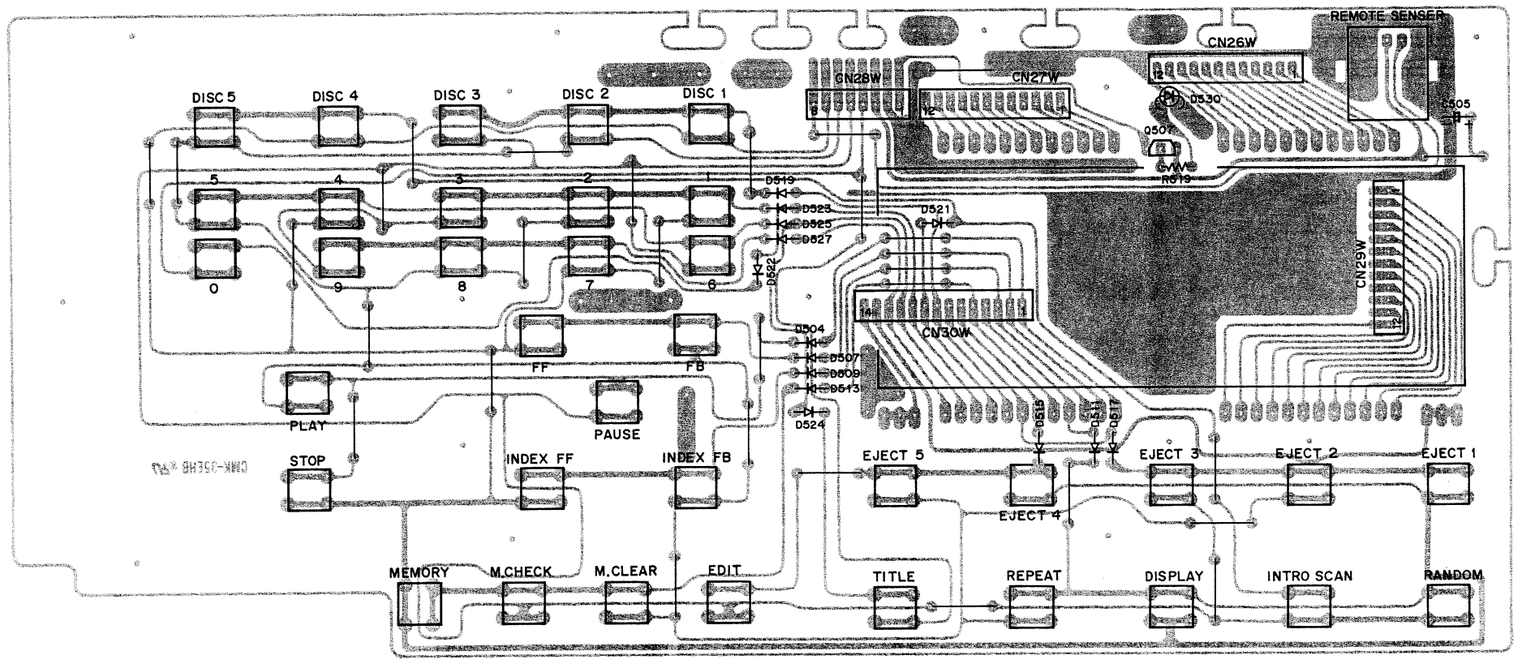
TRANSISTOR DC VOLTAGES

Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	D	G	S
Q301	2SC536	0.6V	0V	0V	Q307	DTA114	0V	− 12.0V	12.2V	Q304	2SK246	16.5V	12.9V	12.9V
Q302	2SD1913	12.9V	16.5V	12.2V	Q308	DTC114	0V	12.2V	0V	Q305	2SK246	− 12.7V	− 17.3V	− 17.3V
Q303	2SB1274	− 12.7V	− 17.3V	− 12.1V	Q309	DTA114	0V	0V	12.2V					
Q306	DTC114	0V	12.1V	0V										

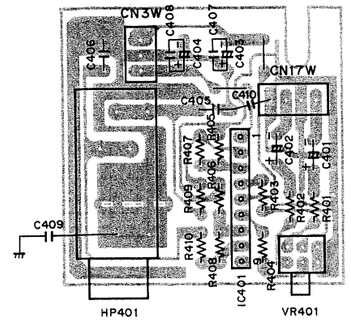
IC PIN NUMBERS DC VOLTAGES

Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC301	NJM2043	− 3.2V	0V	0V	− 12.1V	0V	0V	4.4V	12.2V	–	–	–	–	–	–	–	–	–	–	–	–
IC302	NJM78M05	5.0V	0V	12.2V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC303	NJM431L	2.4V	0V	5.0V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC304	YM3434	3.0V	2.3V	2.2V	4.8V	2.2V	2.4V	0V	4.8V	0.1V	0.1V	2.4V	1.1V	0V	4.8V	4.8V	1.4V	–	–	–	–
IC305	MC74HC14	1.1V	3.2V	2.4V	2.4V	0.1V	4.6V	0V	4.6V	0.1V	0V	4.8V	0V	4.8V	4.8V	–	–	–	–	–	–
IC306	TC74HCU04	2.5V	2.4V	1.7V	4.7V	4.7V	2.5V	0V	1.5V	4.3V	4.3V	1.9V	2.6V	2.5V	5.0V	–	–	–	–	–	–
IC307	TC74HCU04	2.5V	2.4V	1.7V	4.7V	4.7V	2.5V	0V	1.5V	4.3V	4.3V	1.9V	2.6V	2.5V	5.0V	–	–	–	–	–	–
IC308,309	PCM58P	1.9V	5.0V	− 5.9V	3.2V	0V	0V	0V	0V	− 12.0V	0V	0V	0V	5.0V	0V	3.2V	1.5V	2.5V	0V	0.2V	− 12.0V
		21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**	**40**
		0V	0V	0V	− 10.9V	− 11.0V	− 11.0V	− 11.1V	− 10.2V	–	–	–	–	–	–	–	–	–	–	–	–
IC310	NJM4580	0V	0V	0V	− 12.1V	0V	0V	0V	12.2V	–	–	–	–	–	–	–	–	–	–	–	–
IC311	NJM4580	0V	0V	0V	− 12.1V	0V	0V	0V	12.2V	–	–	–	–	–	–	–	–	–	–	–	–

DISPLAY P.C.BOARD
(BOTTOM VIEW)

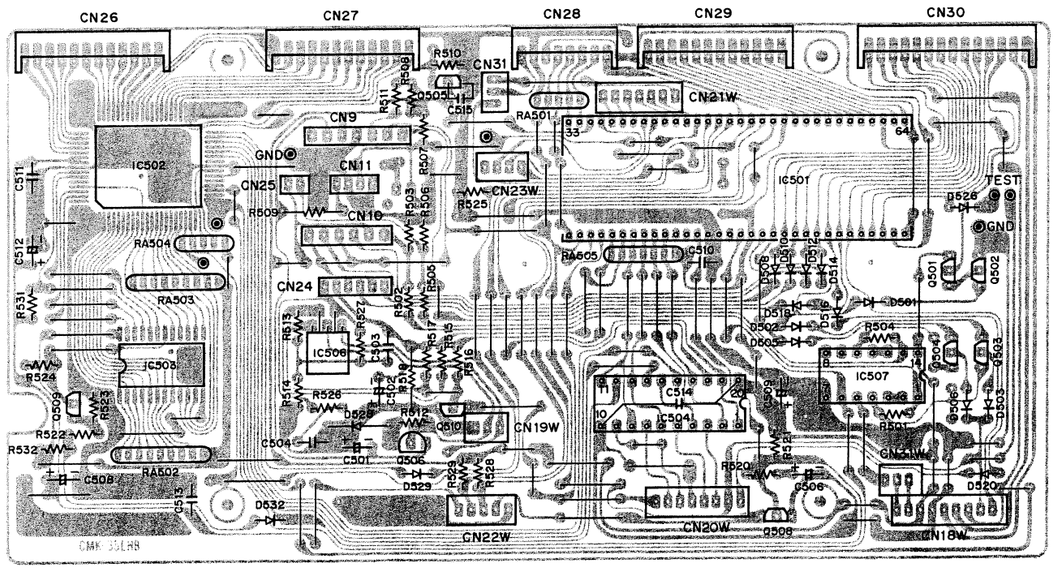


HEADPHONE P.C.BOARD
(BOTTOM VIEW)



IC PIN NUMBERS DC VOLTAGES											
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10
IC401	NJM4556S	12.2V	0V	0V	0V	− 12.1V	0V	0V	0V	12.2V	

CONTROL P.C.BOARD
(BOTTOM VIEW)

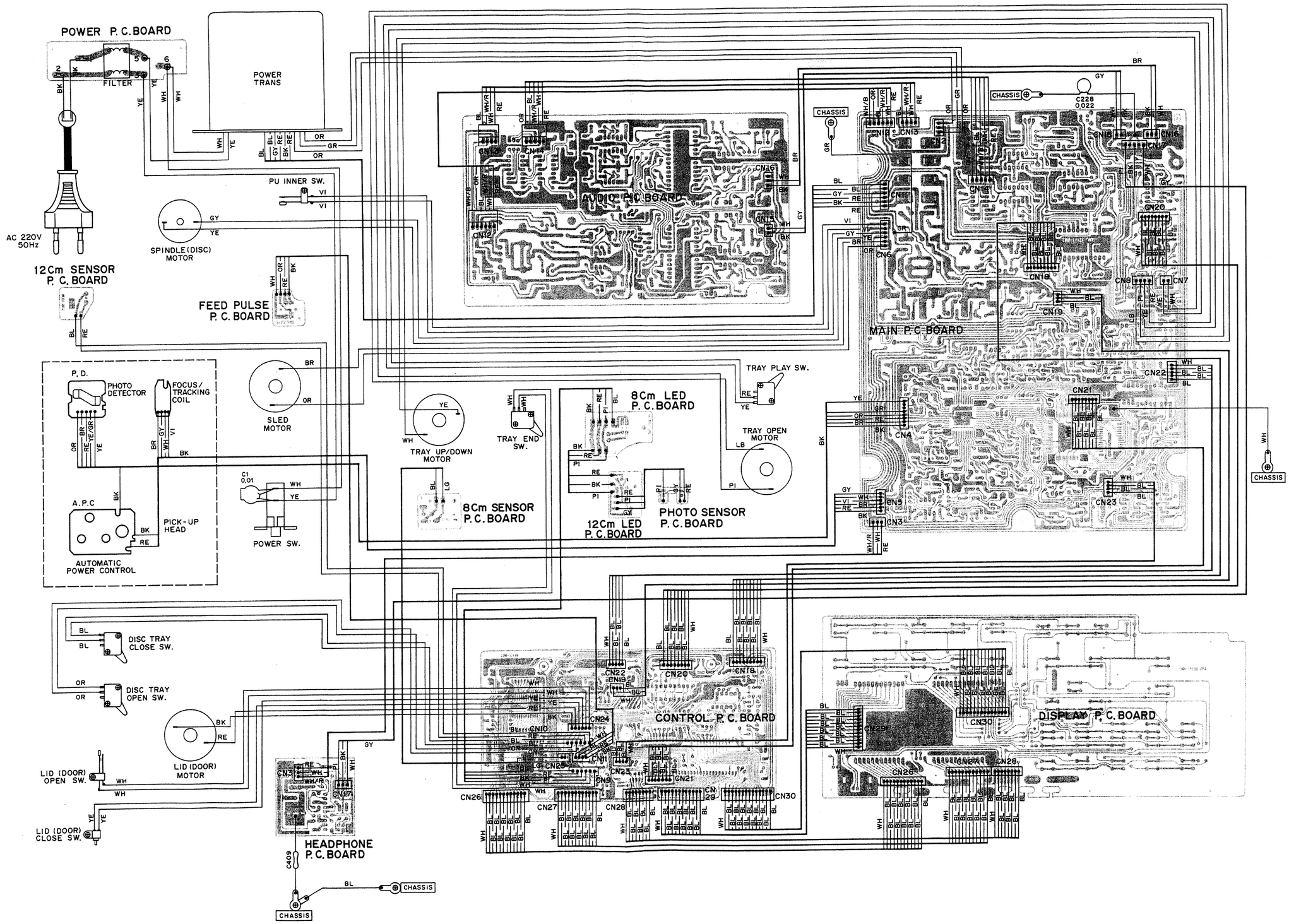


REFERENCE VOLTAGE (Control P.C.Board Section)

IC PIN NUMBERS DC VOLTAGES																				
Ref. No.	DEVICE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
IC501	LC6538D	− 18.8V	− 28.2V	− 25.5V	− 25.5V	− 25.5V	− 25.5V	− 25.4V	− 25.6V	− 25.5V	− 25.5V	− 25.6V	− 25.5V	− 25.5V	− 25.3V	4.9V	2.6V	1.9V	0V	0V	4.9V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		1.7V	2.1V	4.9V	0V	0V	0V	0V	0V	0V	4.9V	1.2V	0V	0V	0V	4.9V	4.4V	0V	0V	0V	0V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		0V	0V	0V	4.9V	0V	4.6V	4.9V	4.9V	4.9V	3.6V	4.9V	0V	0V	− 10.7V	− 2.4V	− 10.8V	− 25.2V	− 2.4V	− 10.7V	− 10.7V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		− 25.2V	− 28.8V	− 22.1V	− 19.1V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC502	M50754	0V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	− 0.2V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	− 0.3V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		0V	4.9V	− 0.5V	− 0.5V	1.4V	− 0.5V	0V	− 0.5V	0V	2.4V	0.1V	0V	0V	0V	− 28.6V	4.9V	4.9V	− 24.1V	− 26.2V	0V
		41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
		− 26.2V	− 26.3V	− 26.2V	− 26.3V	− 26.3V	− 0.6V	− 28.6V	− 28.7V	− 28.6V	− 28.6V	− 28.6V	− 28.6V	− 0.8V	− 28.6V	4.9V	4.9V	− 28.5V	− 28.6V	− 28.6V	− 28.6V
		61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
		− 28.6V	− 28.6V	4.9V	4.9V	0V	− 0.1V	4.9V	0V	4.9V	4.9V	4.9V	0V	–	–	–	–	–	–	–	–
IC503	LC3517B	4.9V	4.9V	4.9V	4.9V	4.9V	4.9V	− 2.5V	4.9V	4.9V	4.9V	4.9V	0V	4.9V	4.9V	4.9V	4.9V	4.8V	0V	4.9V	4.9V
		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
		4.9V	4.9V	4.9V	− 13.5V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC504	LC74HC241	4.9V	4.9V	4.9V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	0V	4.9V	4.9V
IC506	LA6501	15.7V	0V	− 15.6V	0.2V	0V	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IC507	TC74HCU04P	0V	4.9V	4.9V	0V	1.7V	2.6V	0V	4.9V	0V	0V	4.9V	4.9V	0V	0V	–	–	–	–	–	–

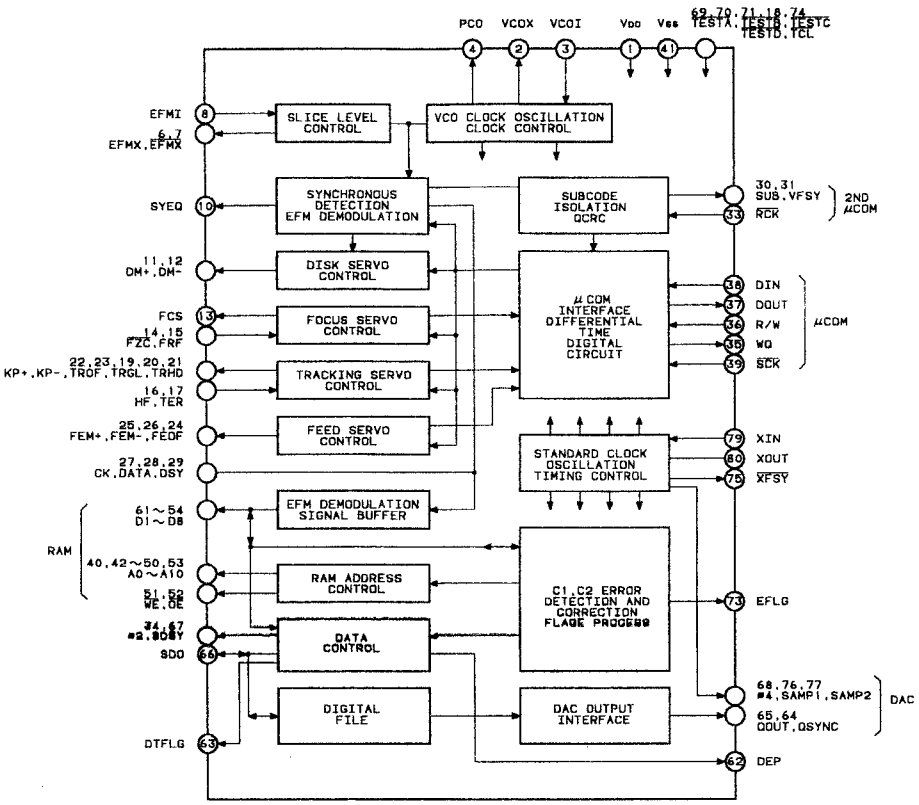
TRANSISTOR DC VOLTAGES														
Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	B	C	E	Ref. No.	DEVICE	D	G	S
Q501	2SA1348	4.5V	− 19.8V	4.9V	Q504	2SA1346	0V	0.2V	0.3V	Q508	2SC3400	0V	4.9V	0V
Q502	2SC3400	0.3V	4.5V	0V	Q505	2SD1012	0V	4.9V	0V	Q509	2SC536	0.5V	0V	0V
Q503	2SA1346	0V	0.3V	0.3V	Q506	2SB598	− 10.0V	− 16.6V	− 9.7V					

WIRING DIAGRAM

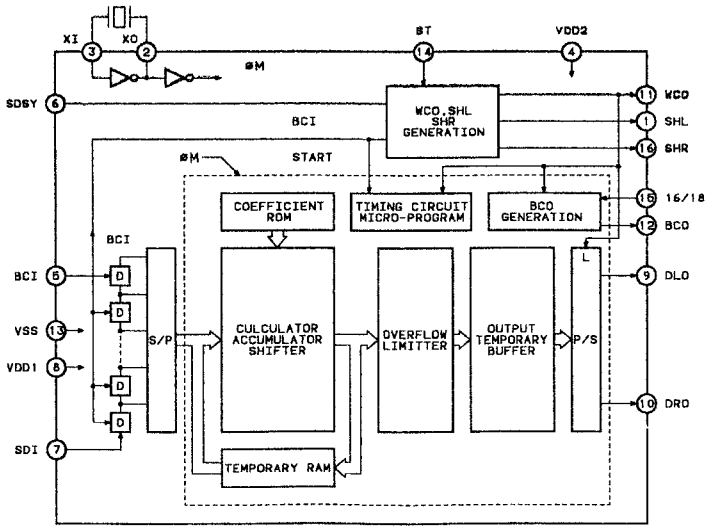


IC BLOCK DIAGRAM

YM3815-H BLOCK DIAGRAM

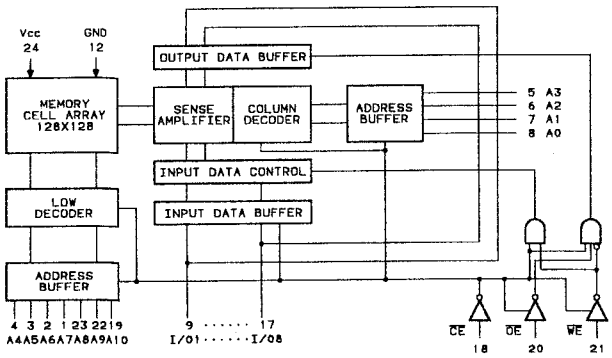


YM3434 BLOCK DIAGRAM

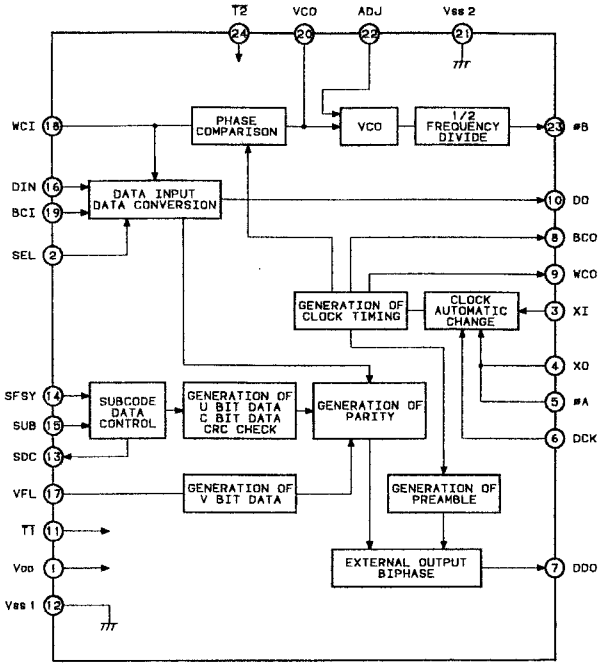


IC BLOCK DIAGRAM (Continued)

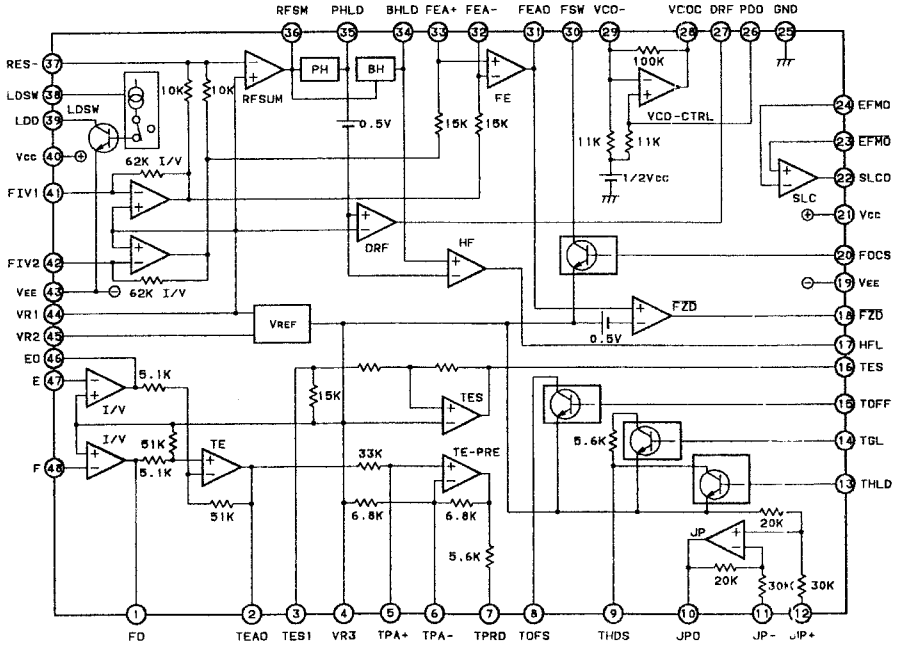
LC3517AM-15 BLOCK DIAGRAM
LC3517BML-15 BLOCK DIAGRAM



YM3613C BLOCK DIAGRAM



LA9200NM BLOCK DIAGRAM



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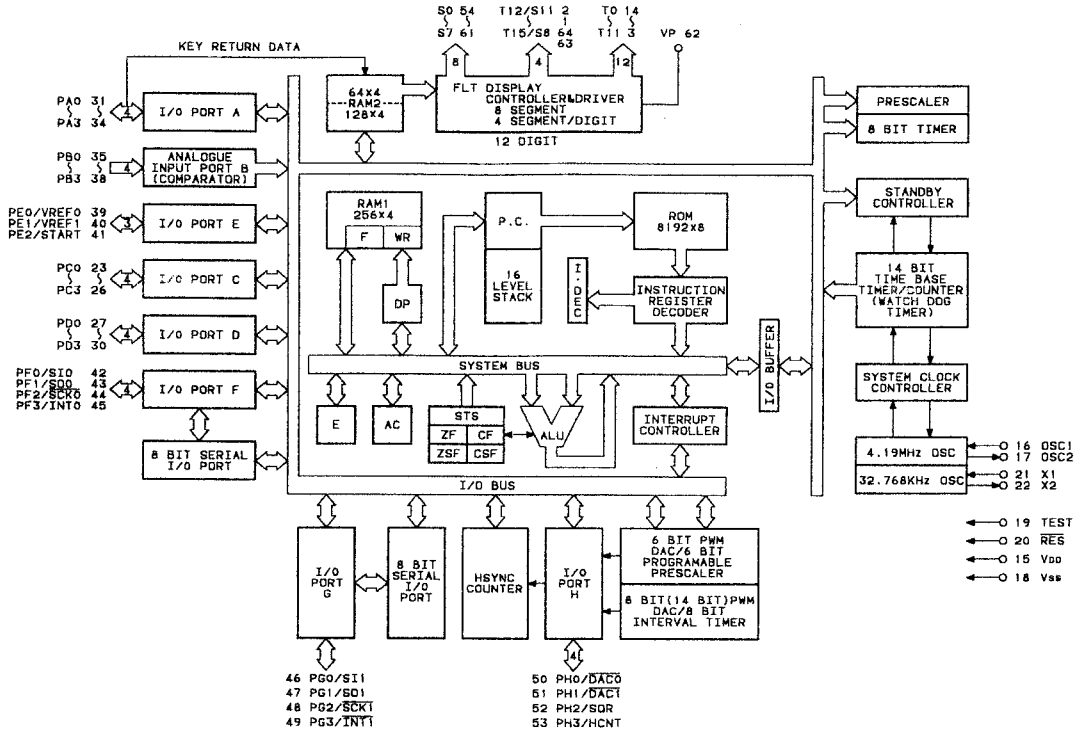

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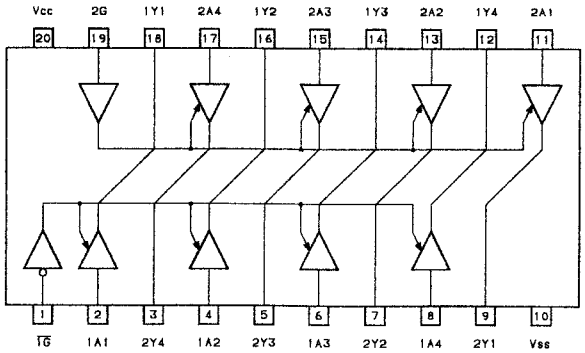

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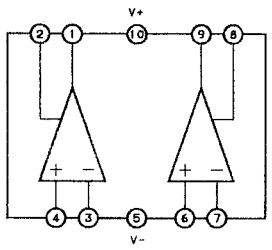

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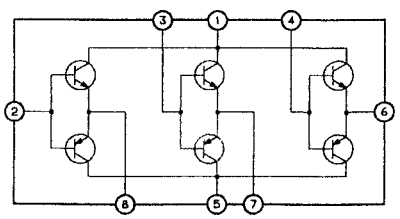

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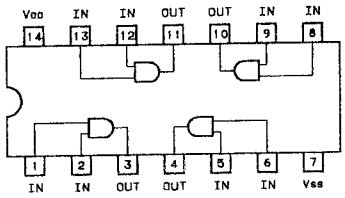

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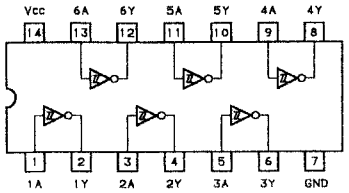

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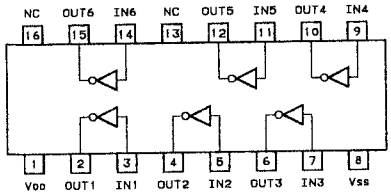

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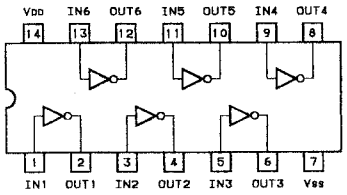

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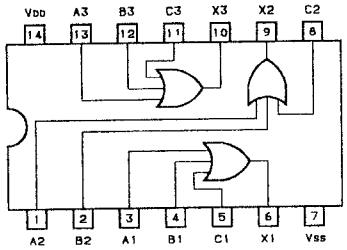

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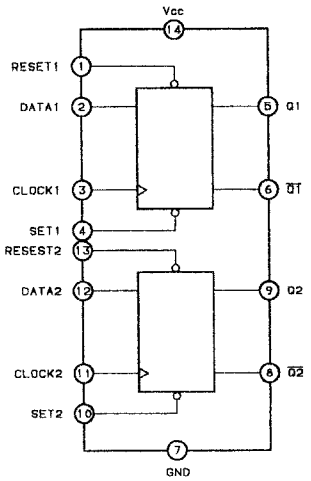

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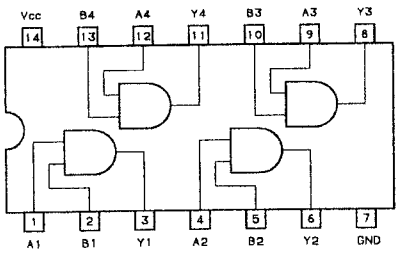

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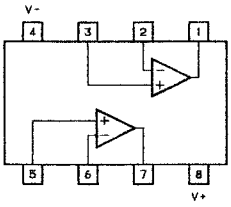
NJM2043DD BLOCK DIAGRAM



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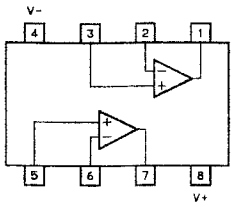

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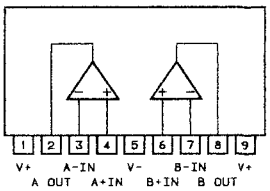

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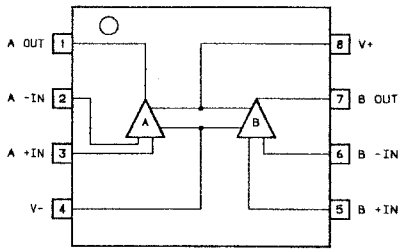
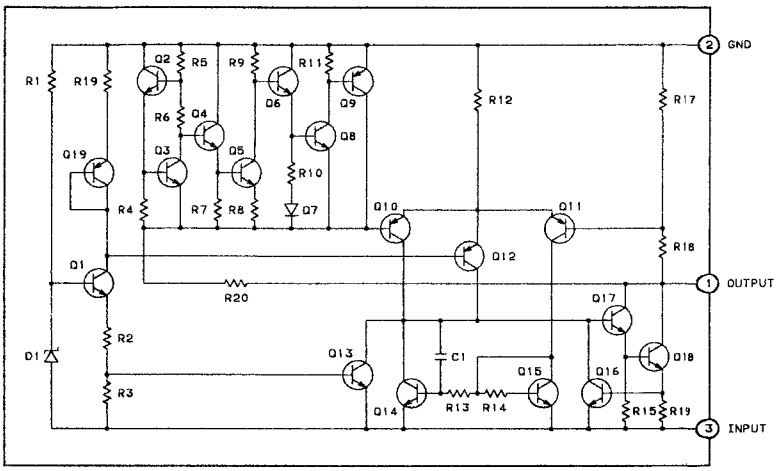
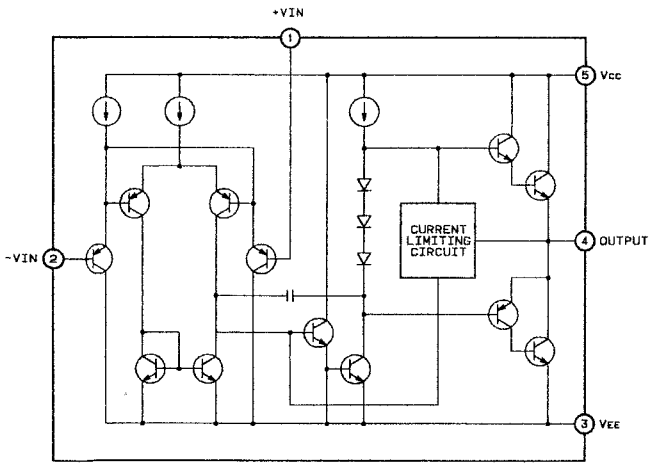


TA79L005P BLOCK DIAGRAM



LA6501-LR BLOCK DIAGRAM



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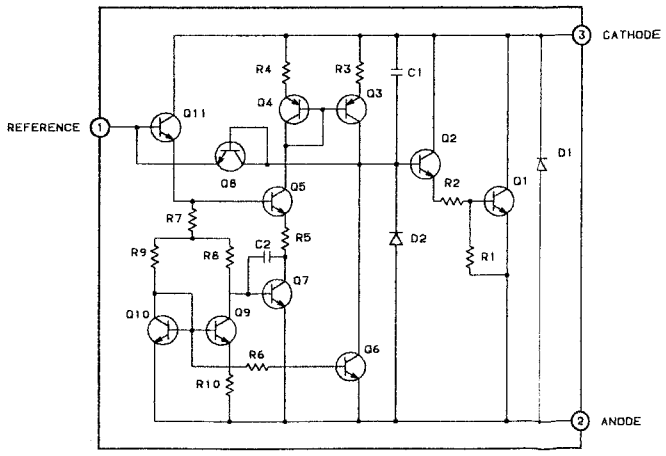
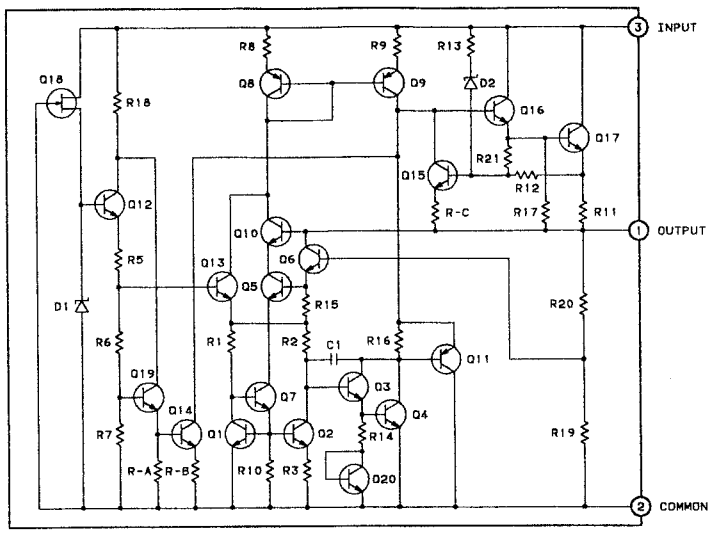


IC BLOCK DIAGRAM (Continued)

NJM78M05FA BLOCK DIAGRAM



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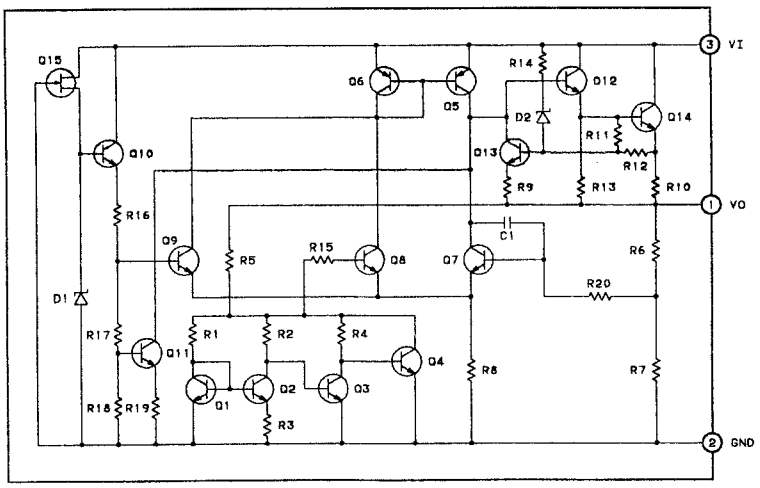
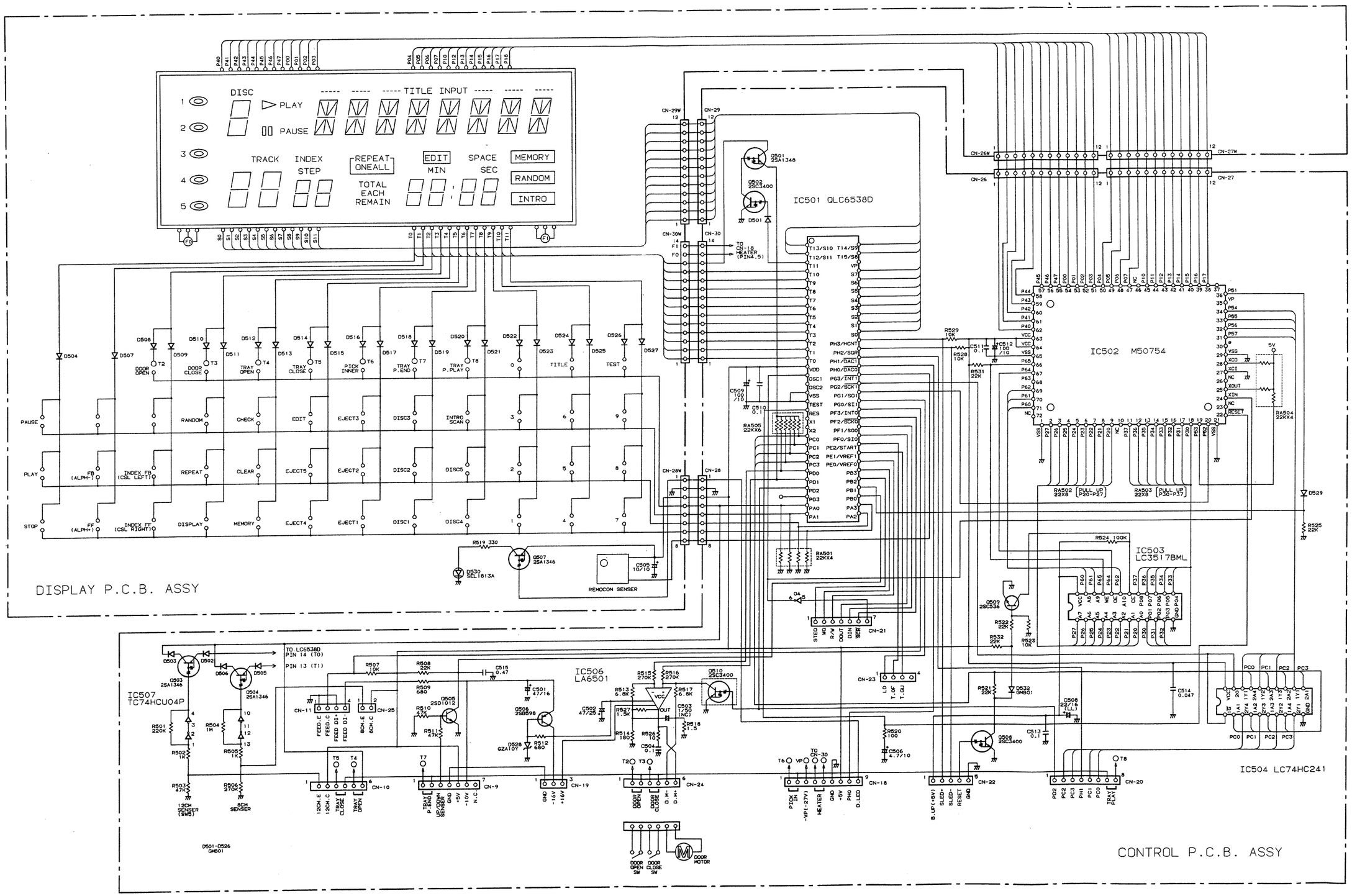


SCHEMATIC DIAGRAM (Control P.C.Board Section)



SCHEMATIC DIAGRAM (CD Main P.C.Board Section)